CITY OF RICHFIELD
WELLHEAD PROTECTION PLAN
PART 2

September 17, 2007

Bonestroo Project No. 673-06114

Bonestroo
Engineers Architects Planners

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PUBLIC WATER SUPPLY

NAME: City of Richfield **PWSID:** 1270045

ADDRESS: 6700 Portland Avenue, Richfield, MN 55423-2599

TELEPHONE NUMBER: 612-861-9700

WELL UNIQUE NOS.: 206353 (1), 206354 (2), 206361 (3), 206276 (4)
206280 (5), 206279 (6), 133362 (7)

WELLHEAD PROTECTION MANAGER

NAME: Brian Young

ADDRESS: 6700 Portland Avenue, Richfield, MN 55423-2599

TELEPHONE NUMBER: (612) 861-9168

E-MAIL: byoung@cityofrichfield.org **FAX No.:** (612) 861-9182

CONSULTANT/TECHNICAL ASSISTANCE

NAME: Bonestroo Rosene Anderlik & Associates, Inc.

ADDRESS: 2335 West Highway 36
Roseville, MN 55113

TELEPHONE NUMBER: (651) 636-4600

E-MAIL: mjanovec@bonestroo.com **FAX No.:** (651) 636-1311

DOCUMENTATION LIST

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PART 2 EXECUTIVE SUMMARY

This portion of the wellhead protection (WHP) plan for City of Richfield includes:

- the results of the Potential Contaminant Source Inventory,
- the Potential Contaminant Source Management Strategy,
- reference to the existing Emergency/Alternative Water Supply Contingency Plan, and
- the Wellhead Protection Program Evaluation Plan.

Part 1 of the wellhead protection plan presented the 1) delineation of the wellhead protection area (WHPA) and the drinking water supply management area (DWSMA) and 2) the vulnerability assessments for the system's wells and the aquifer within the DWSMA. Part 1 of the WHP plan was submitted to the Minnesota Department of Health (MDH) and approved on February 8, 2006. The boundaries of the WHPA/DWSMA are shown in Figure 1.

The *vulnerability assessment* for the aquifers within the DWSMA was performed using available information and indicates that the vulnerability of the aquifers used by the system varies from high to low.

- In the highly vulnerable groundwater protection areas, potential contaminants would be expected to reach the Prairie du Chien – Jordan aquifer system within a few years of release at the surface.
- The low and moderate vulnerability portions of the DWSMA are outside of the 10-year groundwater capture zones, and vertical travel of contaminants to the aquifer is not a concern in these areas.
- The portion of the DWSMA that potentially contributes surface runoff to the highly vulnerable 10-year groundwater capture zone for Well No. 10 contains high, moderate, and low vulnerability areas. The vulnerability rating only has meaning as vulnerability of the aquifer to vertical movement of contaminants from the surface or near the surface into the aquifer.

The *principle potential sources of contamination* to the aquifer vary with the vulnerability rating:

- Low vulnerability areas outside the groundwater capture zone –all non-point sources.
- Moderate vulnerability areas outside the groundwater capture zone - tanks and all non-point sources.
- High vulnerability areas - All land uses and potential contaminant sources.

Also, automotive disposal systems, large sewer systems, and cesspools must be inventoried throughout the DWSMA. All groundwater wells must be inventoried throughout the groundwater portion of the DWSMA. This information was presented to the WHP Team during the Second Scoping meeting held with the MDH, **, when the necessary requirements for the content of Part 2 were outlined and discussed in detail.

Sections 4-7 of this part of the WHP Plan (hereafter referred to as Plan) provide data and analysis in support the approaches taken to address potential contamination sources. Section 8 of this report describes the approaches taken in terms of goals, objectives, and actions to be taken.

In Section 4, the required *data elements* indicated by MDH in the Scoping 2 Decision Notice are addressed. Pertinent data elements include information about hydrology, geology, water quality, and water quantity

A *potential contaminant source inventory* and general *land use* information is given in Section 5. The potential contaminant source and land use inventory reflects the vulnerability of the aquifer in each land

parcel and what is known about the data elements in Section 4.

Section 6 addresses the possible impacts that *changes in the physical environment, land use, and water resources* may have on the public water supply. Continued land development and increases in groundwater appropriations within the DWSMA are anticipated within the next ten-year period. The City of Richfield will update its Wellhead Protection Plan as new public water supply wells are added as required by the Minnesota Wellhead Protection Rules.

The *problems and opportunities* concerning land use issues relating to the aquifer, well water, and the DWSMA and addressed in Section 7. The major concerns addressed in the plan are 1) other wells located within the DWSMA that could become pathways for contamination to enter the aquifer; 2) the pumping effects of high-capacity wells that may alter the boundaries of the delineated WHPA or cause the movement of contamination toward public water supply well(s) and 3) the potential sources of contamination identified in Section 5 of this plan.

The drinking water protection *goals* that the public water supplier (PWS) would like to achieve with this plan are listed in Section 8. In essence, the PWS would like to:

- maintain or improve on the current drinking water quality
- increase public awareness of groundwater protection issues
- protect the aquifer
- continue to collect data on water quality
- practice water conservation

The *objectives and action plans* for managing potential sources of contamination are also contained in Section 8. Actions aimed toward educating the general public about groundwater and land use issues, gathering information about other wells and potential contaminant sources, using the collected data in water supply and land use planning, and collecting data relevant to wellhead protection planning are the general focus.

Section 9 contains *guidance for use* for City of Richfield staff.

Section 10 contains a *guide to evaluate the implementation* of the management strategies of Section 8. The wellhead protection program for City of Richfield will be evaluated a minimum of every two and one-half years.

Section 11 references the *Conservation and Emergency Management Plan* approved by the Minnesota Department of Natural Resources.

Finally, Section 12 discusses the *review process* and addresses any comments brought by local units of government and the public.

1.0 INTRODUCTION

Wellhead protection is a means of safeguarding public water supply wells by helping prevent contaminants from entering the area that contributes water to a well or well field over a period of time. This program is now required in Minnesota since the Minnesota Department of Health (MDH) implemented Minnesota Wellhead Protection Rules in November 1997. The MDH initiated its Wellhead Protection Program in response to the 1986 Amendments to the Safe Drinking Water Act and MDH's statutory authority is granted in the Minnesota Groundwater Protection Act of 1989. This report is the culmination of the City of Richfield's efforts to adopt wellhead protection planning for its water supply system.

The City of Richfield currently operates 7 wells for municipal water supply purposes (See page iv). Four wells are completed in the Prairie du Chien – Jordan aquifer system; two wells are completed in the Jordan aquifer; and one well is completed in both the Ironton-Galesville and Mount Simon aquifers. All the wells are within the city limits.

Detailed descriptions of the geologic and hydrogeologic setting of the water supply system, the delineation of the Wellhead Protection Area and Drinking Water Supply Area, and the well and aquifer vulnerability assessments are presented in *Part 1 Wellhead Protection Plan*, (Bolton and Menk, Inc., November, 2005) which was approved by MDH in February 2006. The rest of this report summarizes the information presented in the Part 1 report, presents additional data elements, and presents the contents of the wellhead protection plan.

2.0 WELLHEAD PROTECTION AREA AND DRINKING WATER SUPPLY MANAGEMENT AREA

The wellhead protection area (WHPA) and drinking water supply management area (DWSMA) delineation analyses were conducted in accordance with Minnesota Rules as administered by the Minnesota Department of Health. The Rules specify the following criteria be applied in the delineation analysis: 1) the aquifer's transmissivity, 2) the groundwater flow field, 3) the maximum average daily pumping rate from each of the existing wells, 4) hydrogeologic boundaries, and 5) time of travel.

The final delineations for the Prairie du Chien – Jordan aquifer system wells (Well #s 1-6) were performed according to the *Draft Guidance for Delineating Wellhead Protection Areas in Fractured and Solution-Weathered Bedrock in Minnesota* (MDH, August 29, 2005). The draft guidance does not take into account the aquifer transmissivity, recharge and discharge boundaries such as other wells, or time of travel for fractured aquifer delineations. Nevertheless, MDH considers the guidance to be consistent with Minnesota Rules for wellhead protection.

The results of the WHPA and DWSMA delineations are presented in Figure 1. Additional details on the delineation analysis are presented in *Part 1 Wellhead Protection Plan,* prepared by Bolton and Menk, Inc. (November 2005). The delineation was approved by MDH in February 2006.

3.0 VULNERABILITY ASSESSMENT

Two separate assessments were undertaken to determine the vulnerability of the City's water supply. The first assessment consisted of an assessment of the vulnerability to contamination of the Prairie du Chien – Jordan aquifer system within the identified DWSMA. The Prairie du Chien – Jordan aquifer system is the shallowest aquifer used by the system, and the vulnerability of this aquifer, therefore, defines the vulnerability of the DWSMA. This assessment was completed according to MDH guidelines and recommended methodology.

The second assessment was a well vulnerability assessment for each of the 7 City of Richfield wells. The well vulnerability assessment was also completed by the MDH. A description of the two assessments is presented in *Part 1 Wellhead Protection Plan* prepared by Bolton and Menk, Inc. (November 2005). The DWSMA vulnerability varies from high to low. The results drove the need for a detailed evaluation of potential contaminant sources, which is presented later in this report.

4.0 DATA ELEMENTS

The State rules relating to wellhead protection require that wellhead protection plans include specific data elements. The required physical environment, water quantity and water quality data elements were addressed in Part 1 of the Plan (Bolton and Menk, November 2005). Part 2 of Chapter 1 of the Plan also includes an assessment of the impact of these data elements on 1) the use of the wells, 2) the wellhead protection area delineation criteria and 3) the quality and quantity of water supplying the public water supply wells. Each of these elements was discussed specifically in the second scoping meeting with MDH and are presented briefly here.

4.1 Precipitation

There is a potential connection between the aquifer and the surface, particularly in high vulnerability areas, and there exists a potential that precipitation could impact aquifer water quality through direct precipitation recharge and infiltration of storm-water runoff. Therefore, potential non-point source contaminants and the influence of precipitation on water quantity should be considered in developing management strategies.

Table 2 shows precipitation at the Minneapolis-St. Paul Internation Airport from 2001 to 2005.

4.2 Geology

A description of geologic conditions in the wellhead protection area is provided in the Part 1 report (Bolton and Menk, Inc., November 2005). The Prairie du Chien Group (Shakopee Formation Dolostone with sandstone and Oneota Dolomite) overlies the Jordan Sandstone throughout the DWSMA. Together these units form the Prairie du Chien-Jordan aquifer system. The Oneota Dolomite acts as a leaky aquitard between the Shakopee Formation and Jordan Sandstone. Groundwater flow in the Prairie du Chien Group is dominated by secondary porosity, primarily solution enhanced, bedding parallel fractures. Groundwater flow in the Jordan Sandstone is primarily through inter-granular pores.

The contact between the Prairie du Chien Group and the overlying Saint Peter Sandstone is a major erosional surface with several meters of relief. The St. Peter Sandstone has been completely removed by erosion in three north-south trending buried bedrock valleys within the DWSMA. The lower portion of the Saint Peter Sandstone contains beds of mudstone, siltstone and shale that act as an aquitard, restricting the movement of water between the two aquifers. In several areas of the DWSMA, the St. Peter sandstone is overlain by the Glenwood (shale) and Platteville (massive limestone and dolostone) formations. The Glenwood shale, along with the Platteville Formation, acts as an effective aquitard, greatly restricting vertical groundwater movement.

The Jordan Sandstone is underlain by the St. Lawrence Formation (dolomitic shale and siltstone), which acts as an effective regional confining unit. The St. Lawrence formation is underlain by the Franconia Formation (very fine grained sandstone with siltstone and shale). The upper part of the Franconia formation is a regional aquifer, but vertical permeability is low. Groundwater flow in the Franconia Formation is dominated fracture flow, primarily through sub-horizontal fractures. The lower part of the

Franconia Formation is a regional confining unit (e. g. *Hydrogeology of the Paleozoic Bedrock in Southeastern Minnesota* by Runkel et al., MGS RI-61, 2003). The Franconia Formation is underlain by the Ironton and Galesville Sandstones aquifer.

The Ironton-Galesville aquifer is separated from the underlying Mt. Simon Sandstone aquifer system by the Eau Claire Formation (siltstone, very fine sandstone, and shale) confining unit. The Mt. Simon aquifer system consists of fine to coarse sandstone with many thin beds of siltstone and very fine sandstone in the upper part.

The surficial sediments consist of sandy glacial outwash and river terrace deposits or recent alluvial, lake, or wetland sediments throughout most of the DWSMA. Loamy glacial till occurs at the surface in a portion of the western part of the DWSMA. In many areas, the sandy surficial sediments are underlain by loamy glacial till or other fine grained sediments, but the extent and effectiveness of subsurface unconsolidated confining units has not been demonstrated in most areas.

Although several geologic cross sections were constructed, the available geologic logs provided limited information about the extent of low permeability quaternary sediments at depth. The vulnerability assessment performed for the Part 1 report (Bolton and Menk, 2005) was based primarily on the bedrock geologic map in the Hennepin County Geologic Atlas (Balaban et al., 1989). In general, areas where the Platteville and Glenwood Formations are mapped were assigned low vulnerability; areas where the St. Peter Sandstone is the uppermost bedrock were assigned moderate vulnerability; and areas were the St. Peter Sandstone is completely eroded were assigned high vulnerability. One area to the southwest of Well #4 was assigned a moderate vulnerability rating based on the presence of a thick sequence of clayey sediments recorded in nearby well logs.

Thus, the bedrock geology was the most important factor considered in the aquifer vulnerability assessment. The DWSMA vulnerability assessment, in turn, was used to define the types of potential contaminant sources requiring management in each part of the DWSMA.

4.3 Soil Conditions

Because there is not a consistent protective layer of bedrock or glacial drift throughout the DWSMA, local soil conditions and soil infiltration characteristics may impact local groundwater quality. It should be noted, however, that the time-of-travel to the aquifers used and reducing conditions in the aquifers support the presence of assimilative capacity boundaries for nitrate and pathogens.

Based on these factors, it was concluded in the approved Part 1 report (Bolton and Menk, Inc., November 2005) that a conjunctive delineation considering surface waters was not necessary for the City of Richfield system. Nevertheless, the Second Scoping Decision Notice (MDH, June 2006) required the inclusion of a soil map for highly vulnerable areas of the DWSMA.

Soils in the area are formed in the Pleistocene glacial deposits and recent deposits described. Soil map units from the County soil survey are plotted for highly vulnerable portions of the DWSMA in Figure 2. It should be noted that where soils have been disturbed in urban areas, the soil properties given in the most recent soil survey may no longer apply.

4.4 Water Resources

The time-of-travel to the aquifers used and reducing conditions in the aquifers support the presence of assimilative capacity boundaries for nitrate and pathogens. Based on these factors, it was concluded in the approved Part 1 report (Bolton and Menk, Inc., November 2005) that a conjunctive delineation considering surface waters was not necessary for the City of Richfield system. Also, based on the available hydrogeologic data, there is no evidence that withdrawals from the City of Richfield have had a negative impact on surface waters within the DWSMA. Nevertheless, the Second Scoping Decision Notice (MDH, June 2006) required the inclusion of this data element.

Surface water resources must be considered for highly vulnerable portions of the City of Richfield DWSMA. In the highly vulnerable areas, surface waters may have an indirect hydraulic connection with the Prairie du Chien – Jordan aquifer system. Water resources, including DNR protected waters, and the storm-water drainage networks are shown in Figure 3. Protected flows have not been established for any streams within the DWSMA, and there are no current water appropriation permits for surface waters within the DWSMA

A majority of the DWSMA drains to Minnehaha Creek and falls under the jurisdiction of the Minnehaha Creek Watershed District. Flow in Minnehaha Creek is highly regulated through control of outflows from the dam at the outlet of Lake Minnetonka. Minnehaha Creek receives the outlet flow from the Minneapolis chain of lakes and Pamela Pond in Edina and direct inflow from storm-water sewers. Minnehaha Creek also drains a large area upstream from the DWSMA.

Portions of DWSMA are within the Nine Mile Creek, Mississippi River, and Minnesota River watersheds. Surface waters within these areas are under the jurisdiction of the Nine Mile Creek Watershed District, the Middle Mississippi River Watershed Management Organization, The Richfield-Bloomington Watershed Management Organization, and the Lower Minnesota River Watershed Management District respectively.

4.5 Surface Water Quality

The time-of-travel to the aquifers used and reducing conditions in the aquifers support the presence of assimilative capacity boundaries for nitrate and pathogens. Based on these factors, it was concluded in the approved Part 1 report (Bolton and Menk, Inc., November 2005) that a conjunctive delineation considering surface waters was not necessary for the City of Richfield system. Nevertheless, in the highly vulnerable areas of the DWSMA, surface waters may have an indirect hydraulic connection with the Prairie du Chien – Jordan aquifer system, and certain types of surface-water contaminants could potentially affect bedrock aquifer water quality.

There are several historical and a few active surface water monitoring stations in or near highly vulnerable portions of the DWSMA including stations at several of the larger lakes and along Minnehaha Creek. In general, data collected at these stations is relevant to surface-water quality but is not directly relevant to potential impacts to groundwater quality. Constituents of concern to surface-water quality that are not directly related to potential groundwater contaminants include temperature; secchi disk depth, transparency tube, turbidity (indirect measures of suspended solids), or suspended solids; phosphorous; and chlorophyll. These parameters have an impact on or reflect biological

conditions within the surface water body.

More constituents are analyzed in samples from a Metropolitan Council station near the outlet of Minnehaha Creek, but this station is outside of the DWSMA (downstream from Lake Hiawatha). It is unknown if samples collected at this site reflect conditions within the DWSMA.

Data from three NPDES permitted discharge sites (former TPI Petroleum facility, Edina Water Treatment Plant #2, and Minneapolis/St. Paul International Airport Mother Lake Drainage Area) are available from the Minnesota Pollution Control agency. These data have been included in Appendix A.

4.6 Groundwater Quality

Results of routine monitoring of the City of Richfield's wells are on file with the Minnesota Department of Health. The water supply meets all State and Federal drinking water standards and no human made contaminants have been detected in the water. Tritium (12.7 tritium units) was detected in Well #2, indicating that a significant portion of the water supplying the well was in contact with the atmosphere within the previous 50 years.

The detected tritium confirms that, although human made contaminants have not been detected in the well water, the six wells completed in the Prairie du Chien – Jordan aquifer system are vulnerable to surface contaminants. Relatively high iron concentrations in the raw well water indicate reducing conditions in the aquifer, and reduction of nitrate or denitrification may occur. Thus despite the lack of an extensive confining unit in some areas, there appears to be a significant assimilative capacity boundary for nitrate.

4.7 Groundwater Quantity

There are a number of wells in Richfield and surrounding cities which are covered by state groundwater appropriation permits. There are no known well interference problems in vicinity of the City of Richfield water supply wells. Data on all water appropriations permits and volumes pumped are maintained by the Minnesota DNR Division of Waters in the SWUDS (State Water Use Data System) database.

Based on recent pumping volumes and the *Projected Water Demand for the Twin Cities Metropolitan Area* regional report (Metropolitan Council, 2001) water use in the City of Richfield is expected to grow up to 9% by 2010. Metropolitan Council forecasts anticipate population growth of 3,390 or close to 10% between 2000 and 2010. The City has adopted a water conservation plan, and no new wells will be required to supply the projected increase in demand.

5.0 CONTAMINANT SOURCE INVENTORY

As part of the City of Richfield wellhead protection planning process, an inventory of potential contaminant sources was conducted within the delineated drinking water supply management area (DWSMA). The purpose behind this inventory was to develop a database listing potential sources of contamination that may affect the public water supply wells. The results of this effort provide the City with information about contaminant sources identified in the DWSMA. Wellhead protection planning strategies can be directed in a manner that will deal with any potential sites before they become a problem or a threat to Richfield's drinking water supply.

5.1 Land Use

Understanding land use is important in determining key areas for concern in managing a wellhead protection area. For example, knowledge about the location of future commercial or industrial development in relation to the DWSMA may reveal a need to closely manage the activity within more sensitive areas. Additionally, any land uses that currently pose a potential threat to the City's water supply need to be highlighted to increase awareness of any concerns.

Following a scoping meeting held with Minnesota Department of Health (MDH) staff in ** 2006, City and Bonestroo, Rosene, Anderlik, & Assoc. staff proceeded to locate information about land and water use within the delineated DWSMA for the City of Richfield wells. Any data that was relevant to the public water supply wells, the quality of the water being drawn in to the wells, or land and groundwater uses around the wells was considered important in determining any potential threat to the water supply. The following criteria were established in the Second Scoping Decision Notice from MDH:

1. All areas must be evaluated for the presence of wells, automotive disposal systems and cesspools (types of Class V or shallow disposal wells), and large sewer systems serving more than 20 people or 2 or more facilities
2. Moderate vulnerability areas must also be evaluated for the presence of tanks.
3. All land uses and potential sources of contamination must be evaluated in high vulnerability areas.

MDH provided a composite database from State and Federal sources on potential point sources of contamination such as tanks, toxic release sites, dumps, NPDES permitted discharge sites, hazardous waste generators, and other potential sources. The database includes general information and approximate locations for each feature. Each type of potential contaminant source is described separately in the following sections.

A map of generalized land use is provided as Figure 4, and a zoning map is provided as Figure 5. Existing land use data developed by the Metropolitan Council for the year 2000 are displayed on the land use map (Figure 4). This is the best available map of actual land uses for the entire DWSMA. Figure 6 shows the locations of wells and potential contaminant sources identified on specific parcels. Table 2 lists the wells and potential contaminant sources mapped in Figure 6.

5.2 Shallow Disposal Wells

Disposal wells are potential sources of contamination that must be inventoried for the entire DWSMA. The US EPA regulates disposal wells (Class V injection wells). Automotive disposal wells have been banned in groundwater protection areas, and cesspools have been banned throughout Minnesota. Further, the Code of Federal Regulations (Title 40, Chapter I, Part 144.12(a)) states that "no owner or operator [of an injection well] shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons."

No Class V injection wells have been identified within the DWSMA.

5.3 Wells

An important component of the potential contaminant source inventory was the location of any known wells within the portion of the DWSMA surrounding the groundwater capture zones. Since wells may penetrate confining/low permeability layers that normally protect an aquifer, they are potential pathways for contaminants to rapidly enter the aquifer. A search for active and abandoned wells was undertaken for the groundwater DWSMA.

The following sources were used to identify and locate wells in the DWSMA:

1. Minnesota Geological Survey's County Well Index (CWI)
2. Department of Natural Resources SWUDS database
3. City of Richfield staff knowledge about current and historical land uses
4. Aerial photographs
5. GIS parcel database

Wells identified in the databases were located to the highest accuracy feasible using the information provided in the databases along with the parcel database and air photos. The identified wells are plotted on the map in Figure 6, and listed in Table 2. The results of the well search indicated that there are ** wells known to be in the DWSMA, including the City of Richfield public supply wells. Wells that have been abandoned and sealed or are inactive are labeled as such in the table. Some temporary wells, such as temporary dewatering wells that were properly sealed after use, are not included in the inventory. The inventory may not include wells which are unknown at this time and/or were never properly abandoned.

The status of the wells listed in Table 2 have not all been verified. The approximate accuracies of the locations of the wells in Table 2, as mapped in Figure 6, are listed in Table 2 . The wells are located on the correct land parcel if sufficient location data are available.

The majority of the identified wells are/were used for domestic water supply. Commercial, industrial, irrigation, monitoring, and public supply wells were also identified. Within the City of Richfield, there are no known abandoned municipal well sites. Currently, all municipal wells constructed for the City of Richfield are still in active use.

The impact of other high capacity wells on the groundwater flow field and the quantity of water used was addressed in *Part 1 Wellhead Protection Plan, City of Richfield Minnesota* (November 2005) prepared by Bolton and Menk, Inc.

5.4 Point Sources

An important component of the potential contaminant source inventory was to look for any potential point sources within the DWSMA that might be a threat to the quality of the public water supply. A point source is any facility that stores, handles, or disposes of materials that, if introduced into the environment, might degrade the quality of the water pumped from the aquifer. An example of a point source would be an underground storage tank. Potential point sources of contamination were identified according to the criteria listed above in Section 5.1.

The first step in the point-source search was to investigate available resources listing potential sites of concern. The MDH provided the City with a database listing underground storage tank sites, above ground storage tank sites, leaking underground storage tank sites (LUST sites), hazardous waste generators, spill sites, agricultural chemical storage sites, and other potential point sources of contamination. The data points were associated with the correct land parcels using the location information provided in the database. Items located within the DWSMA were identified and inventoried according the required criteria.

Field reconnaissance of the DWSMA performed by City of Richfield and Bonestroo, Rosene, Anderlik, & Assoc. staff identified other commercial and industrial sites that may be of concern that are not included in the available databases. A majority of the sites identified were listed in the database provided by MDH, however.

A listing of potential point source sites is presented in Table 2. Information about the status of and the materials stored in tanks and the status of and substance leaked at LUST sites are also provided in the table where they are available. GIS data files in ArcView shape format containing the point source data are also available electronically. The locations referred to in Table 2 are mapped in Figure 6.

In addition to the types of point sources discussed above, individual sewage treatment systems (ISTS, commonly referred to as septic systems) are also a concern in high vulnerability areas. Failed or substandard systems may be a threat to aquifer water quality, particularly in high vulnerability areas of the groundwater capture zones. Nitrate is a contaminant of particular concern that may derive from ISTS. The Minnesota Pollution Control Agency (MPCA) has developed technical standards and criteria for ISTS, which are contained in MN Rules Chapter 7080. State Rules have been adopted by Hennepin County as Ordinance No. 19.

Hennepin County provides a permitting and inspection program for Edina, Minneapolis, and MSP airport. All ISTS are unlawful within the City of Richfield, and no septic systems are known to exist within the City of Richfield. An inventory of ISTS systems within the DWSMA was performed (Figure 6 and Table 2).

Proactive management of potential point sources of contamination within the 1-year groundwater capture zones, or Emergency Response Areas, and in high vulnerability areas closest to the wells is of most immediate concern. These items pose the greatest potential risk to the quality of water drawn from the public water supply wells. Nevertheless, all of the potential point sources in the inventory have the potential to impact groundwater quality and should be managed appropriately.

Potential point sources located in highly vulnerable portions of the ERAs include seven closed LUST sites; a former dump; three agricultural chemical storage/preparation sites; gasoline, diesel, fuel oil, and waste oil underground storage tanks, and wells. None of these facilities are believed to currently threaten the quality of water reaching the City of Richfield public supply wells.

5.5 Non-Point Potential Contaminant Sources

Non-point sources of contamination are associated with land use not specific to a particular point or facility. For example, golf courses to which fertilizers and/or pesticides and herbicides have been applied are potential sources of infiltration or runoff containing nitrate and pesticides/herbicides or pesticide/herbicide degradation products. Low density residential areas and recreational facilities where turf chemicals are applied, and streets and parking lots may also be non-point sources of potential contaminants.

The land use map (Figure 4) provides a guide to areas that may be non-point sources. Contaminants derived from non-point sources may infiltrate directly to groundwater, or they may be transported as surface runoff to areas where infiltration occurs. Non-point sources are, therefore, a concern within high vulnerability areas and areas that drain directly to areas of concentrated infiltration within high vulnerability areas. A map of the storm-water drainage system is provided for reference in Figure 3.

Although portions of the DWSMA are rated as highly vulnerable, the depth of the City of Richfield wells, the apparent assimilative capacity with respect to nitrate, and the fact that surficial contaminants have not been detected in the well water make non-point sourced of contamination a low priority concern.

5.6 Public Utility Services

Spills on or leaks from infrastructure systems are also potential sources of contamination that could have an impact on aquifer water quality. Roadways, railways, and oil pipelines are examples of possible transportation routes that may be the site of a leakage or spill that could threaten the aquifers. Other infrastructure, such storm sewers may divert water to an area with higher surface water infiltration, creating an increased sensitivity to pollution. Sanitary sewer leaks could also degrade groundwater quality.

Interstate Highways 35W and 494 and State Highways 62 and 77 are the major trunk highways intersecting the DWSMA. State Highway 100 forms part of the western border of the DWSMA (Figure 1). Other trunk and collector roads are also shown in Figure 1. An inactive branch rail line extends into the DWSMA from Bloomington to the industrial area near the intersection of I-35W and Hwy. 62 in Minneapolis (Figure 1).

Three Center Point Energy gas pipelines intersect the DWSAM, but leaks from gas pipelines are not considered a significant risk to bedrock aquifer quality. Leaking gas would be expected to dissipate primarily into the atmosphere. Figure 7 shows the sanitary sewer system map for the City of Richfield.

Public water supply wells are also components of the public utility infrastructure. The locations of the wells are shown on Figure 1. Currently, the only wells classified as public supply (or municipal) within the DWSMA are the ten City of Richfield wells.

5.7 Active Sites of Contamination

Currently, there are no known active sites of contamination within the delineated DWSMA for the City of Richfield. While several sites exist within the DWSMA that have the potential to contaminate the Prairie du Chien - Jordan aquifer, none of these sites is known to currently be leaking or discharging hazardous wastes into the soil or groundwater.

Should any contamination sites be identified within the DWSMA, they will be prioritized in order of the threat they pose to the municipal wells. Site specific soil conditions, geology, surface runoff, and estimated time of travel to the public supply wells will be investigated to assess the level of threat to the City's water supply.

5.8 Summary

The scope of the potential contaminant source inventory is summarized in the table below.

Type of Potential Contaminant Source	Total Active / Current	Total Removed / Closed / Inactive
Storage Tank	157	391
LUST site	5	124
Hazardous Waste Generator	140	2
VIC Site	12	0
Dump	4	1
Toxic release site	0	1
Agricultural Chemical Storage	26	1
Agricultural Site, Unknown	0	0
ISTS (Individual sewage treatment system)	3	0
Gravel Pit	0	0
Class V wells	0	0
National Discharge Permit	5	0
Groundwater Wells	669	59
Unknown / Other Point Source	0	0
Cemetery	4	0
Airport	1	0

The acreage of non-point source land uses was not determined for this report, but the land use and zoning maps provided as Figures 4 and 5 provide a tool for understanding the scope of land uses in the DWSMA. The inventory was made as complete as practicable at the time of the development of this Plan. Further data collection issues and other problems and opportunities associated with land uses in the DWSMA are addressed in Chapter 7. Plan goals, objectives, and actions are addressed in Chapter 8.

6.0 PROJECTED CHANGES TO THE ENVIRONMENT, LAND USE, AND SURFACE AND GROUNDWATER

6.1 Changes and Impact of Changes to the Environment and Land Use

Some further redevelopment/growth is expected for the City of Richfield over the next 10 years. Table 3 shows the population predictions for the City from 2000 to 2020. The population is expected to increase by about 20% over the period. The planned land use for the DWSMA and surrounding areas, as designated in the city comprehensive plans submitted to the Metropolitan Council is mapped in Figure 8. Planned land use changes within the City of Richfield include converting from residential to non-residential uses along Cedar Ave. and expanding commercial areas along I-494. Few land use changes are planned within the parts of Minneapolis, Edina, and Bloomington intersected by the DWSMA.

6.2 Changes to Surface and Groundwater

The planned land use changes will have a moderate net effect on surface and groundwater because the changes generally involve redevelopment of previously developed areas. Redevelopment will provide the opportunity to improve existing storm-water infrastructure. In general, however, changes in land use are not expected to significantly change runoff, infiltration, or overall water quality.

Since groundwater recharge that feeds Richfield's wells in not limited to the area within the City, Richfield is looking towards cooperation with Hennepin County and other local units of government to help implement groundwater protection on a wider basis throughout the southern portion of the County.

7.0 PROBLEMS AND OPPORTUNITIES

7.1 Problems

1. Portions of the DWSMA for the City of Richfield's Wells are vulnerable to contamination.
2. Portions of the DWSMA include areas of significant commercial and industrial activity, some of which represent potential point sources of contaminants.
3. Residential areas of the DWSMA represent potential non-point sources to which the water supply system may be susceptible if lawn care activities are conducted inappropriately or excessively or household hazardous wastes are disposed of improperly.
4. The number and location of improperly abandoned wells in the DWSMA is not known with a high degree of certainty.
5. The number and location of automotive disposal systems (a type of Class V well) in the DWSMA is not known with a high degree of certainty.

7.2 Opportunities

1. Opportunities exist to work with the surrounding communities and the Metropolitan Airports Commission in planning land uses to protect the aquifers within the DWSMA.
2. The opportunity exists to cooperate with the City of Edina and the City of Saint Louis Park specifically on the implementation of wellhead protection plans in overlapping DWSMAs.
2. Watershed management districts and organizations exist to manage surface water drainage within the DWSMA.

7.3 Status of Existing Governmental Controls Concerning Water and Related Land Use

City of Richfield

Zoning ordinances are the primary means by which the City of Richfield controls water and land use within the city. The land in the DWSMA is currently zoned as shown in Figure 5. Zoning regulations are contained in Sections 506 – 551 of the City of Richfield Codes. The following zoning districts are designated:

Residential

- R Single Family Residential
- R-11 Low Density Single Family Residential
- MR-1 Two Family Residential
- MR-2 Multi-Family Residential
- MR-3 High Density Multi-Family Residential

Commercial

- C-1 Neighborhood Business
- C-2 General Commercial
- C-3 High Density Commercial

Mixed Use Districts

- (MU-R) Mixed Use Regional
- (MU-C) Mixed Use Community
- (MU-N) Mixed Use Neighborhood

Industrial

- I Industrial

Planned Unit Development

- PR Planned Residential
- PMR-1 Planned Two Family Residential
- PMR Planned Multi-Family Residential
- PC-1 Planned Neighborhood Commercial
- PC-2 Planned General Commercial
- PI Planned Industrial

Other official controls available to Richfield for regulating land use within the DWSMA include conditional use permits and other ordinances. Specific ordinances that might be applied for land use, aquifer protection, and water protection purposes are: Water Resources Management Regulations (Section 429); Garbage, refuse, yard waste, and recyclables preparation, collection, and disposal (Section 601); Wells – well drillers (Section 620); Sewer system (Section 700); Water system (Section 710); Storm sewer system (Section 720); and Bodies of water (Section 835)

These controls, along with the proposed City of Richfield wellhead protection implementation plan, are anticipated to be adequate in managing the land activities occurring within the City of Richfield portion of the DWSMA. Any deficiencies noted will be addressed and corrected in revisions to the wellhead protection plan.

Hennepin County

Hennepin County employs ordinances to regulate land use but most would not apply to Richfield's wellhead protection efforts. Most County ordinances are only applicable in unincorporated parts of the County, but the DWSMAs are entirely within incorporated cities. Hennepin County does provide an

ISTS (individual sewage treatment system) permitting and inspection program for cities that have delegated that authority to the County. Within the City of Richfield DWSMA, this includes Edina, Minneapolis, and MSP International Airport. The County also enforces a Hazardous Waste Management Ordinance.

Minnehaha Creek Watershed District

The MCWD is governed by a seven-member Board of Managers, who are appointed by the Hennepin and Carver county boards. As required by state law, the MCWD has developed a comprehensive water resources management plan (Wenck Associates, Inc., 1997) that describes the existing water resources and water-related problems within the watershed, possible solutions to the problems and the objectives of the MCWD. The plan sets forth the goals and direction of the MCWD. MCWD is currently updating the 1997 plan, and the new plan will contain 11 subwatershed plans.

Minnehaha Creek Watershed District regulates water management issues within its boundary through a permitting process. The MCWD reviews permit applications for land development after the application has received preliminary city approval.

Nine Mile Creek Watershed District

The Nine Mile Creek Watershed District has an approved Water Management Plan. The District has established a grading and land alteration permitting program that establishes minimum requirements for the control and regulation of grading and earthmoving. Nine Mile Creek Watershed District requires permits for such projects to ensure that land use changes do not negatively impact water quality and flood protection.

Lower Minnesota River Watershed District

The LMRWD provides technical review of project proposals but does not issue permits. The LMRWD enters into joint resolutions with local units of government concerning review of projects for their impacts on watershed resources. The LMRWD also reviews projects within the Minnesota River floodplain for conformance with its floodplain regulations. The watershed district is currently operating under a management plan adopted in 1999.

Richfield-Bloomington Watershed Management Organization

The Richfield-Bloomington Watershed Management Organization (RBWMO) was established by the cities of Richfield and Bloomington through a joint powers agreement in 1983. The organization is governed by a Board of Commissioners which is comprised of the Richfield and Bloomington City Councils. The RBWMO adopted a management plan in 2001 and changed its original boundaries in 2000 to include Richfield and Wood Lakes. The RBWMO Board of Commissioners meets annually and relinquishes technical review and permitting for projects affecting surface water resources to the cities within their respective jurisdictions.

Mississippi River Watershed Management Organization

The Mississippi Watershed Management Organization (MWMO) was originally created in 1985 but was renamed and reorganized to its present state in 1997 by a joint and cooperative agreement executed by the cities of Minneapolis, St. Paul, Lauderdale, Falcon Heights, St. Anthony, and the Minneapolis Park and Recreation Board. As stated in its current management plan adopted in 2007, the MWMO does not issue permits or provide approval letters for construction projects but relies on the existing permitting and enforcement bodies of its member communities. However, the MWMO Board of Commissioners reserves the right to review and comment on plans that affect the quality and quantity of water within and across its watershed and sub-watershed boundaries.

Adjacent Communities

Cities intersected by the DWSMA include Bloomington, Edina, Minneapolis, and St. Louis Park. The DWSMA also intersects the Minneapolis-St. Paul International Airport, which is under the authority of the Metropolitan Airports Commission (MAC). Zoning ordinances are also the primary means of regulating land use activities in surrounding cities The Commissioner of Health has delegated to the City of Minneapolis the authority to issue well permits and establish well construction standards equal to or exceeding the requirements of the state Well Code.

The DWSMA for the City of Richfield overlaps DWSMAs for the City of Edina (MN-00039, MN-00040, MN-00041, MN-00052, and MN-00053) and the City of Saint Louis Park (MN-000274). City of Edina Well #s 2, 3, 4, 5, 6, and 17 are within the City of Richfield DWSMA. The St. Louis Park DWSMA covers the entire area of the Richfield DWSMA that falls within the City of St. Louis Park and extends into portions of Minneapolis and Edina that are intersected by the City of Richfield DWSMA.

Edina and Bloomington have implemented Wellhead Protection Plans approved by MDH. St. Louis Park has completed Part 1 of its Wellhead Protection Plan and is in the process of completing its Plan. Thus, significant portions of the City of Richfield DWSMA fall within previously approved DWSMAs, and management plans have been established or are being established for these areas already.

State and Federal Regulations

Many of the state and federal regulations for potential sources of pollution are design and operation standards. Examples are regulations concerning on-site sewer systems, underground storage tanks, and landfills. It should be noted that the state's design and operation standards would be adequate for most contaminant sources within the City of Richfield DWSMA.

Land use authority that addresses the location of potential sources of contamination within the City of Richfield DWSMA rests with local units of government according to Minnesota law. Since the City of Richfield DWSMA falls within several local units of government, each local unit of government has jurisdiction over the territory of the DWSMA that falls within its borders.

State and federal governmental units regulate:

- Well construction – MDH; (City of Richfield and City of Minneapolis)
- Well sealing – MDH;
- State groundwater appropriation permits – DNR;
- Public water supply quality – MDH;
- Setbacks for specific contaminant sources from a well – MDH and local governments through conditional use permitting;
- Tank control program – MPCA, MDA
- Shallow disposal wells - US EPA.

Any of the permitted activities which have the potential to affect the wellhead protection delineation and/or the quality or quantity of the City of Richfield water supply should be reviewed by the respective state or federal agency before a permit can be approved.

The wellhead protection planning team recommends that no additional regulations be imposed at this time and are confident that local issues may be adequately addressed through existing processes.

8.0 WELLHEAD PROTECTION GOALS, OBJECTIVES AND IMPLEMENTATION PLAN

Goals and objectives have been developed based on the results of the vulnerability analysis, the results of the potential contaminant source inventory, and the projected changes to the environment, land use, and surface and ground water. In general, goals and objectives are ranked in order of priority.

8.1 Goals

The following goals form the framework within which the information generated during delineation and source inventory activities is evaluated and upon which the planning activities are based:

1. Maintain water quality and abundant water quantity for Richfield residents and businesses.
2. Increase public education and awareness of wellhead protection through use of newsletters, Consumer Confidence Reports, and the City's website.

8.2 Objectives

Higher priority will be placed on implementing management strategies in areas of the DWSMA not within previously approved DWSMAs. Primary wellhead protection management efforts for areas within previously approved DWSMAs, which fall outside of the City of Richfield, will be deferred to those Wellhead Protection Plans. To meet Richfield's goals, the Wellhead Protection Planning Team would like to concentrate management efforts on the following factors to create awareness of groundwater protection and help prevent future contamination of the aquifer:

A. Inform the public about groundwater availability and water quality issues (Public Education)
B. Manage wells (Wells)
C. Manage the Inner Wellhead Management Zone (IWMZ) to prevent contaminants from entering the area within a 200 ft. radius of the wells.
D. Manage above- and underground storage tanks (Storage Tank Management).
E. Inform the public about household waste (Household Hazardous Waste).
F. Cooperate with Hennepin County on the management of commercial/industrial hazardous waste (Hazardous Waste Management)
G. Manage septic systems within the City of Richfield and cooperate with Hennepin County and the City of Bloomington to manage septic systems (Septic Systems Management)
H. Educate the public about proper use of lawn and garden chemicals (Turf Management)
I. Manage urban stormwater (Urban Stormwater Management)
J. Address impact of groundwater withdrawals on the wellhead protection area (High Capacity Wells)
K. Inform the public about shallow disposal wells (Shallow Disposal Wells)

A. Public Education

Objective A: Develop public support and understanding for the wellhead protection plan through the use of newsletters, the Consumer Confidence Report, and web pages.

Action A1: Include information about wellhead protection and groundwater protection in the *Your City* newsletter.
Who: City of Richfield staff
Cooperators: MDH
When: Within 6 months of adoption of this Plan
Cost: Staff time
How: Identify and obtain existing educational materials available from MDH and other sources. Write newsletter articles describing wellhead protection and include contact information and web site addresses for existing educational resources.
Status: In progress

Action A2: Include summary information about the Wellhead Protection Plan in the annual Consumer Confidence Report mailed to water customers. Provide contacts and web site addresses for educational resources.
Who: City of Richfield staff
When: Within 6 months of adoption of this Plan
Cost: Staff time
How: Summarize information gathered in other actions in the CCR.
Status: Not currently implemented.

Action A3: Include information about the Wellhead Protection Plan and links to other wellhead protection related resources on the City's web pages.
Who: City of Richfield staff
When: Within 6 months of adoption of this Plan
Cost: Staff time
How: Provide a summary of wellhead protection goals and implementation in Richfield. Provide links to wellhead protection related web sites at MDH, MDA, and EPA.
Status: Not currently implemented.

B. Wells

Objective B1: Locate unidentified wells and inactive/abandoned wells in the Wellhead Protection Area.

Action B1-1: Request that MDH or the City of Minneapolis inform the City of Richfield when permits are granted for new wells or maintenance of existing wells or abandoned wells are sealed within the WHPA. Request that Hennepin County or the City of Minneapolis inform the City of Richfield when existing wells are disclosed as a result of property transfer within the WHPA.

Who: City of Richfield staff
Cooperators: MDH, City of Minneapolis, Hennepin County
When: Within 3 months following adoption of this Plan
Cost: Staff time
How: Contact designated Points Of Contact at MDH, City of Minneapolis, and Hennepin County.
Status: Not currently implemented.

Objective B2: Take measures to prevent cross connections between private well systems and the public water supply.

Action B2-1: Require that whenever any premises are connected to the City water system, there shall be maintained a complete physical separation between the City water supply system and the private water supply system

Who: City of Richfield staff, City Council
When: Ordinance passed in 1971
Cost: Staff time
How: Enforce city code
Status: Existing city ordinance

Objective B3: Educate the public about proper well management.

Action B3-1: Provide links to MDH well management web sites on the City's web pages.

Who: City of Richfield staff
Cooperators: MDH
When: Ongoing
Cost: Staff time
How: City staff will add hyperlinks to the web site.
Status: Not currently implemented.

C. Inner Wellhead Management Zone

Objective C1: Manage the 200 ft. radius Inner Wellhead Management Zones to prevent contaminants from entering the area immediately surrounding the wells.

Action C1: Continue to monitor setbacks for all new potential sources of contamination located within the IWMZ.
Who: City staff
Cooperators: MDH
When: Annually
Cost: Staff time
How: The wellhead protection manager will ensure that any new regulated activities will meet the required setbacks.
Status: Continuation of ongoing activities

D. Storage Tanks Management

Objective D: Notify owners of tanks located in the DWSMA that the tank is in a source water protection area, and educate owners of properties containing tanks of the importance of spill prevention.

Action D1: Contact property owners and make them aware of their placement within the City's wellhead protection area.
Who: City staff
Cooperators: MPCA
When: Within 12 months of adoption of this Plan.
Cost: Staff time
How: Send mailing out to property owners notifying them about the Drinking Water Supply Management Area delineation and the importance of spill prevention. Provide contact numbers for appropriate government agencies if requested.
Status: Not currently implemented.

E. Household Hazardous Waste

Objective E: Educate the public about household hazardous waste, and provide the public with services relating to household hazardous waste.

Action E1: Use existing newsletter or website to encourage residents to use the Hennepin County year and local collection events.
Who: City staff
Cooperators: Hennepin County Department of Environmental Services
When: Ongoing
Cost: Staff time
How: Include information about wellhead protection and the

importance of proper disposal of household hazardous wastes in the newsletter or website. Provide facility addresses, operational hours, and Hennepin County contact and web site information. Also include local collection event schedule.

Status: Not currently implemented

F. Hazardous Waste Management

Objective F: Cooperate with Hennepin County on the management of commercial/industrial hazardous waste.

Action F1: Use existing website to encourage business owners to take advantage of services provided by the Hennepin County Environmental Protection division.

Who: City staff

Cooperators: Hennepin County Department of Environmental Services

When: Ongoing

Cost: Staff time

How: Provide a hyperlink to the Hazardous Waste page in the Hennepin County web pages. The web page provides contact information, Hazardous Waste information, forms, fact sheets, and links to the *Generator Newsletter*.

Status: Not currently implemented

Action F2: Provide Hennepin County with a DWSMA location map.

Who: City staff

Cooperators: Hennepin County Department of Environmental Services

When: February 2006

Cost: Staff time

How: Notification of the approval of the WHPA and DWSMA delineations and vulnerability assessments. The County may choose to concentrate hazardous waste enforcement efforts within source water protection areas.

Status: Currently implemented

G. Septic Systems Management

Objective G1: Prevent the discharge of sewage to soil or water within the City of Richfield.

Action G1: Make unlawful any private sewer system or the unsanitary discharge of human or animal wastes within the City of Richfield.
Who: City Council, enforced by Building Inspector
When: Ongoing
Cost: Staff time
How: Enforce existing City ordinance (Section 700.03).
Status: Already implemented.

Objective G2: Cooperate with Hennepin County to educate property owners about the need for having complying onsite sewage treatment systems.

Action G2: Assist County's efforts to education property owners about ISTS systems.
Who: City staff
Cooperators: Hennepin County Environmental Services
When: Ongoing
Cost: Staff time
How: Provide assistance to Hennepin County, as requested.
Status: Not currently implemented

H. Turf Management

Objective D: Encourage residential property owners to use lawn and garden chemicals responsibly.

Action D1: Cooperate with existing local (NPDES permitting) and County programs to educate property owners about the advantages and disadvantages of the use of chemicals for lawn care and about ways to minimize the potential adverse environmental effect of the chemicals if they choose to use them.
Who: City staff
Cooperators: Minnehaha Creek Watershed District, Nine Mile Creek Watershed District, Richfield-Bloomington WMO, Middle Mississippi WMO, City of Bloomington, City of Edina, City of Minneapolis, Metropolitan Airports Commission, MPCA, University of Minnesota Extension, Minnesota Department of Agriculture
When: Ongoing
Cost: Staff time

How: Provide materials to cooperators as requested and provide educational links for homeowners on website

Status: Currently partially implemented.

I. Urban Stormwater Management

Objective I: Cooperate with other programs and agencies to manage stormwater quality.

Action I: Continue to implement the City's Storm Water Pollution Prevention Plan in fulfillment of NPDES permit requirements.

Who: City staff, City's environmental engineering consultant, City Council

Cooperators: MPCA, Minnehaha Creek WD, Nine Mile Creek WD, Richfield-Bloomington WMO

When: Ongoing. Annual review of SWPPP.

Cost: No additional costs.

How: The City of Richfield has adopted its Stormwater Pollution Prevention Plan (SWPPP) to meet MPCA stormwater permit requirements (2003 – 2008). The SWPPP includes measures for public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site runoff control, post construction storm-water management, and pollution prevention and good housekeeping for municipal operations. The SWPPP meets the storm-water management needs of the WHP Plan within the Richfield city limits.

Status: Currently implemented

J. High Capacity Wells

Objective J: Identify possible impacts on the wellhead protection area of new high capacity wells or changes in water appropriations.

Action J: Request that the MDH or the City of Minneapolis inform the City of any proposed high capacity wells to be constructed in or near the DWSMA and request the DNR to notify the City of any changes in appropriations to existing wells that may impact the wellhead protection areas.

Who: City staff

Cooperators: MDH, DNR, City of Minneapolis

When: Within 3 months of adoption of this Plan.

Cost: Staff time

How: Send a letter and a figure showing the Wellhead Protection Areas and the DWSMA to the MDH, DNR, and City of

Minneapolis requesting that the City of Richfield be informed of hi-cap well permit applications or changes in appropriations that would affect Richfield wells and/or the Richfield DWSMA.

Status: Not currently implemented

K. Shallow Disposal Wells

Objective K: Attempt to identify shallow disposal wells in the DWSMA and notify owners of federal reporting responsibilities.

Action K1: Identify known possible shallow disposal sites within the DWSMA.
Who: City of Richfield Staff
Cooperators: MDH, US EPA
When: Completed
Cost: Staff time
How: Conduct survey of parcels within DWSMA, identifying suspected Class V well sites. Ask City staff to report observed Class V wells as they are discovered.
Status: Currently implemented.

Action K2: Prioritize inventoried area.
Who: City of Richfield, City's environmental consultant
When: Already completed
Cost: Staff and consultant time
How: Possible and known Class V well sites identified will be prioritized based on land use at the site, whether they are within the groundwater capture zone portion of the wellhead protection area, aquifer vulnerability, and distance to a public water supply well.
Status: Not currently implemented, since no sites are currently known.

Action K3: Notify MDH of shallow disposal well sites within the DWSMA as they are identified by City staff.
Who: City staff
Cooperators: MDH
When: At the time of discovery
Cost: Staff time
How: Mail a letter to the regional MDH Environmental Health Division planner identifying the shallow disposal well site.
Status: Not currently implemented since no sites are currently known.

Action K4:	Notify owners of Class V wells about federal reporting requirements.
Who:	Wellhead Protection Manager and City staff
Cooperators:	MDH
When:	At the time of discovery.
Cost:	City staff time
How:	A fact sheet on Class V wells and reporting requirements will be provided to the landowner describing what a Class V well is and the impacts they can have on groundwater quality.
Status:	Not currently implemented, since no sites currently known.

9.0 GUIDANCE FOR USE BY CITY OF RICHFIELD STAFF WELLHEAD PROTECTION PLANNING

To ensure that wellhead protection planning is viable for City of Richfield, the City staff should understand the nature of the City's program and how their day-to-day actions pertain to the wellhead protection program

Wellhead Protection Manager: City of Richfield Water Superintendent (Brian Young)

9.1 Activities Affecting Wellhead Protection

The list presented below reflects the type of information or activities that City staff may encounter or manage as part of their normal functions that should be communicated to the wellhead protection manager. Any observed occurrence of the following that may impact surface water or groundwater quality should be reported to the City of Richfield Wellhead Protection Manager:

Public Safety (Police & Emergency Services)

- Emergency response and spills
- Observed dumping

Public Safety (Inspections)

- Hazardous materials storage or disposal (household, commercial, or industrial)
- Unsealed or abandoned wells
- Underground storage tank removal, particularly if contamination is observed
- Observed dumping

Fire Department

- Emergency response and spills
- Underground storage tank removal, particularly if contamination is observed
- Fire suppression (if techniques may affect water quality)

Community Development and Planning Commission

- Zoning changes
- Unusual infiltration or storm-water issues
- Environmental Assessment Worksheets (EAWs)
- Special projects

Public Works

- Well sampling and analysis results
- Contamination noted during construction
- Change in pumping of municipal wells
- Sanitary sewer line breaks/ruptures
- Sanitary sewer lift station overflow/failure

Recreation Services

- Observed dumping
- Turf management

In addition, several programmatic activities will need on-going review and consideration. These generally involve fewer departments, and are listed below.

City Manager

- Review new ordinance development to ensure consistency with Wellhead Protection Plan

Community Development and Planning Commission

- Ordinance review and development of official controls, as necessary
- Interaction and liaison with other local units of government
- Education activities
- Development of Best Management Practices for use in DWSMA

Wellhead Protection Manager

- Internal coordination and plan management
- Interaction with external cooperators

10.0 PROGRAM EVALUATION

The City of Richfield will evaluate the progress of the implementation plan every two years. The Wellhead Protection Plan Manager will prepare a progress report to be completed every two years after the Plan is adopted. The progress report will briefly discuss the actions implemented by the City or any cooperators during the previous two years, and actions that will be completed in the next two years. The progress report will be distributed to the City Council for their review after which it will be submitted to MDH.

According to Minnesota Wellhead Protection Rules, this wellhead protection plan will be updated every 10 years from date of adoption or with the installation of any new municipal well to the water supply system.

11.0 EMERGENCY PREPAREDNESS AND CONTINGENCY PLAN

The City of Richfield's has a completed Water Emergency and Conservation Plan on file. The plan was submitted to both the Department of Natural Resources and the Metropolitan Council for their review and approval. This plan fulfills the emergency preparedness and contingency planning requirements of the Wellhead Protection Rules. A copy of the approval letter for the plan is provided in Appendix B. The City is currently in the process of updating this plan, which is expected to be completed in the year 2007.

As required by the US EPA, The City of Richfield has also completed its Vulnerability Assessment and Emergency Response Plan for its water supply system. A copy of the certificate of completion for the Vulnerability Assessment is also provided in Appendix B. The Emergency Response Plan will be incorporated into updates to the Water Emergency and Conservation Plan.

12.0 LOCAL GOVERNMENT REVIEW AND PUBLIC HEARING

The draft City of Richfield wellhead protection plan was submitted to local units of government for their review and comments on February 21, 2007. The required 60-day review period ended on April 23, 2007. Copies of comments received from local government units are provided in Appendix C. All comments were considered and, when deemed appropriate, responses were incorporated in this version of the Wellhead Protection Plan.

A public hearing was held the on the evening of April 24, 2007 at City Hall as part of the regular City of Richfield Council meeting. At the meeting, no comments were received from the general public. A copy of the public hearing meeting minutes is provided in Appendix D.

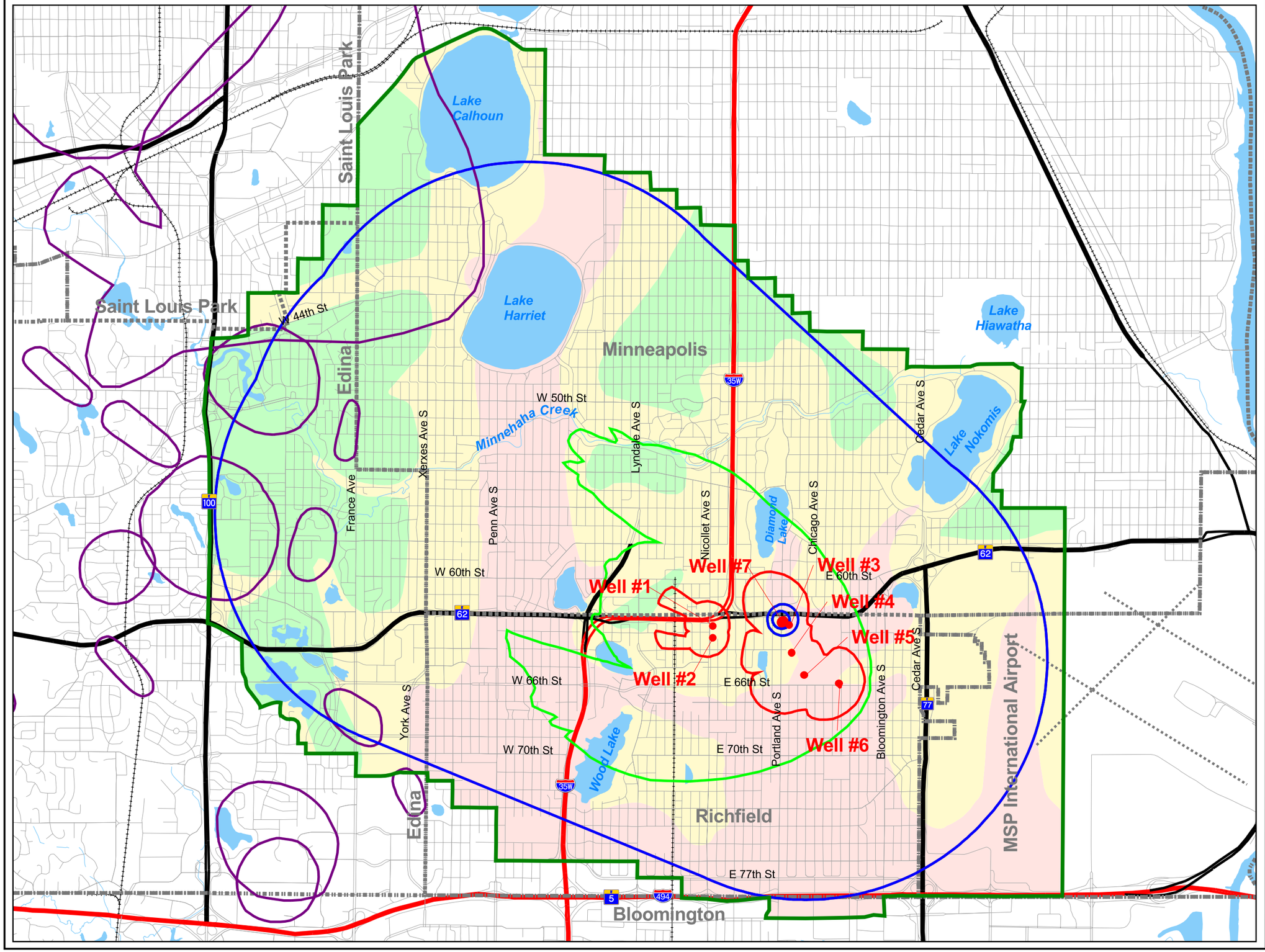
FIGURES

City of Richfield

WHPA & DWSMA

Wellhead Protection Plan

Figure 1



- Richfield Well
- Richfield DWSMA
- Richfield WHPA
- Richfield ERA
- Other WHPA

Vulnerability

- High
- Moderate
- Low

- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream
- Lake / Pond

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

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Symbol	Description
D10A	Forada sandy loam, 0 to 2 percent slopes
D16A	Seelyeville and Markey, ponded, 0 - 1 % slopes
D17A	Duelm loamy sand, 0 to 2 percent slopes
D30A	Seelyeville and Markey, depressional, 0 - 1 % slopes
D34B	Urban land-Hubbard complex, 0 to 8 percent slopes
D6A	Verndale sandy loam, acid substratum, 0 - 2 % slopes
D6B	Verndale sandy loam, acid substratum, 2 - 6 % slopes
D6C	Verndale sandy loam, acid substratum, 6 - 12 % slopes
D7A	Hubbard loamy sand, 0 to 2 percent slopes
D7B	Hubbard loamy sand, 2 to 6 percent slopes
D7C	Hubbard loamy sand, 6 to 12 percent slopes
D8E	Sandberg loamy coarse sand, 18 to 35 percent slopes
L28A	Suckercreek fine sandy loam, occasionally flooded
L30A	Medo soils, depressional, 0 to 1 percent slopes
L3B	Rasset sandy loam, 2 to 6 percent slopes
L3C	Rasset sandy loam, 6 to 12 percent slopes
L4B	Crowfork loamy sand, 1 to 6 percent slopes
L50A	Houghton and Muskego, depressional, 0 - 1 percent slopes
L52C	Urban land-Lester complex, 2 to 18 percent slopes
L54A	Urban land-Dundas complex, 0 to 3 percent slopes
L55B	Urban land-Malardi complex, 0 to 8 percent slopes
L55C	Urban land-Malardi complex, 8 to 18 percent slopes
L62E	Koronis-Kingsley-Malardi complex, 18 to 35 percent slopes
L6A	Biscay loam, 0 to 2 percent slopes
M-W	Water, miscellaneous
U1A	Urban land-Udorthents, wet substratum, 0 - 2 % slopes
U2A	Udorthents, wet substratum, 0 to 2 percent slopes
U3B	Udorthents (cut and fill land), 0 to 6 percent slopes
U4A	Urban land-Udipsamments (cut and fill), 0 - 2 % slopes
U5A	Urban land-Udorthents, wet substratum, 0 - 2 % slopes
U6B	Urban land-Udorthents (cut and fill), 0 - 6 % slopes
W	Water

City of Richfield

SOILS

Wellhead Protection Plan

Figure 2

- Richfield Well
- Richfield DWSMA
- Highly Vulnerable

Dominant Hydrologic Group

- A
- A/D
- B
- B.D
- D
- No Data

- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream
- Lake / Pond

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

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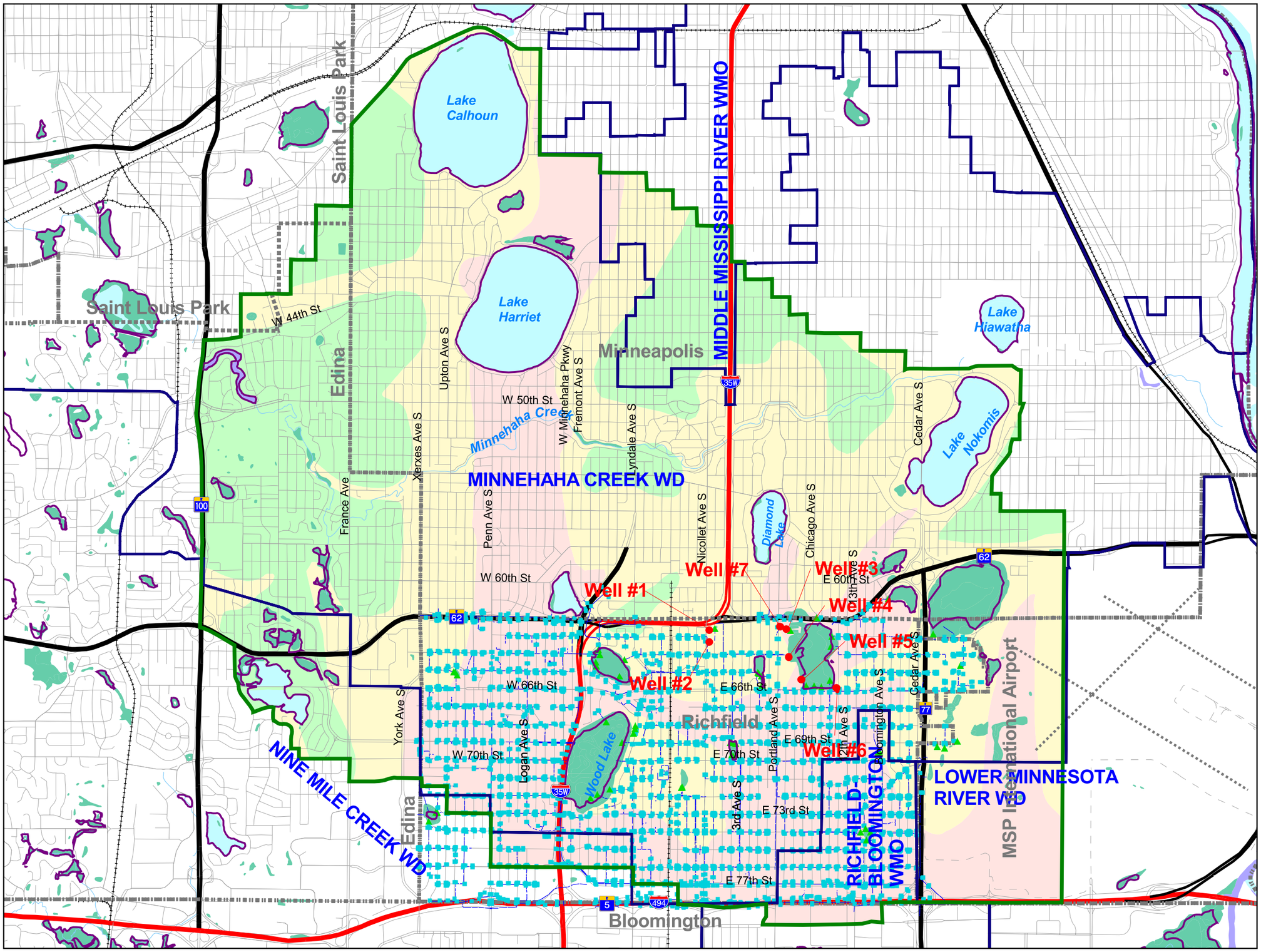
City of Richfield

WATER RESOURCES & STORM WATER DRAINAGE

Wellhead Protection Plan

Figure 3



- Catch Basin
- Outlet
- Richfield Well
- Storm Pipe
- Richfield DWSMA
- DNR Protected Water
- WD/WMO

NWI Wetland System
- Lacustrine
- Pallustrine
- Riverine

Vulnerability
- High
- Moderate
- Low

- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

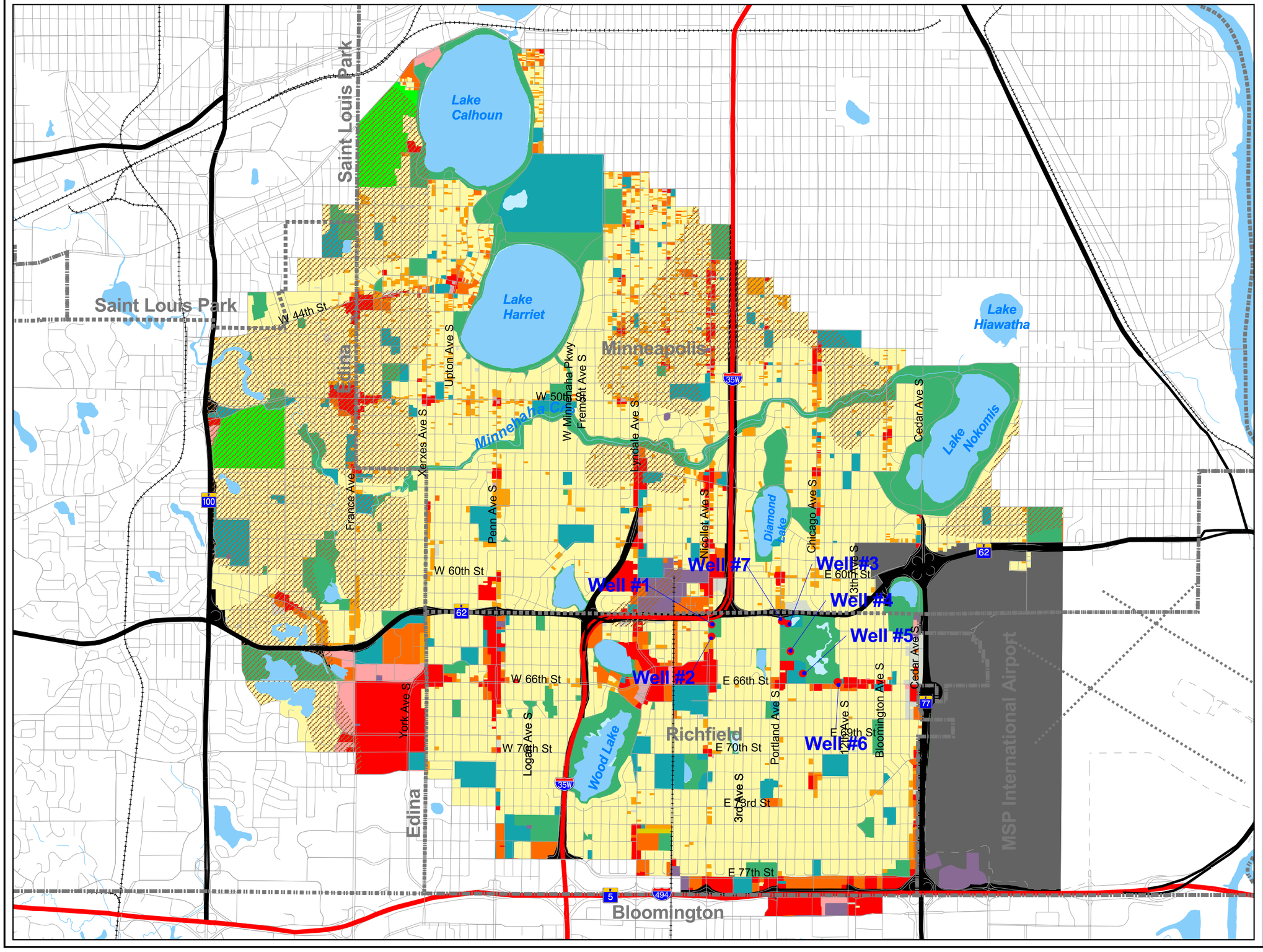
k:\673\67306114\cad\avproj\richfield_whp2.apr

City of Richfield

LAND USE (2005)*

Wellhead Protection Plan

Figure 4



- Richfield Well
- Single Family Residential
- Manufactured Housing Park
- Moderate Density Res.
- High Density Res.
- Commercial
- Office
- Mixed Use Residential
- Industrial and Utility
- Institutional
- Park or Recreational
- Golf Course
- Major Highway
- Railway
- Airport
- Undeveloped
- Water
- Low Vulnerability
- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

* Land use data from Metropolitan Council

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

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City of Richfield

ZONING

Wellhead Protection Plan

Figure 5

- Richfield Well
- Industrial
- Service Office
- Neighborhood Commercial
- General Commercial
- High Density Comm'l
- Single Family Residential
- S. Family - Low Density
- Multi Res. (discontinued)
- Two Family Residential
- Multi Res. - Med. Density
- Multi Res. - High Density
- Planned General Comm'l
- Planned Multi Res.
- Planned Two Family Res.
- Multiple Use - Neighborhood
- Multiple Use - Community
- Multiple Use - Regional
- Low Vulnerability
- Lake / Pond
- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

k:\673\67306114\cad\avproj\richfield_whp2.apr

City of Richfield

POTENTIAL CONTAMINANT SOURCES INVENTORY

Wellhead Protection Plan

Figure 6

PCSI
- Aboveground storage tank
- Air release permit
- Boat landing
- Bridge
- Cemetery
- Dump
- Gage station
- Garden
- Haz. waste generator permit
- Hospital
- Hotel/Motel
- ISTS
- LUST
- National discharge permit
- NFRAP (removed from CERCLIS)
- Observation well
- Park
- Public water supply
- Registered storage tank permit
- School
- Storage or preparation area
- Storage tank (unspecified)
- Surface water intake
- Toxic release site
- Underground storage tank
- Unspecified
- Voluntary investigative clean-up
- Well

- Richfield Well
- Richfield WHPA
- Richfield ERA
- Other WHPA

Vulnerability
- High
- Moderate
- Low

- Water Use Permit Outside DWSMA
- Lake / Pond
- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

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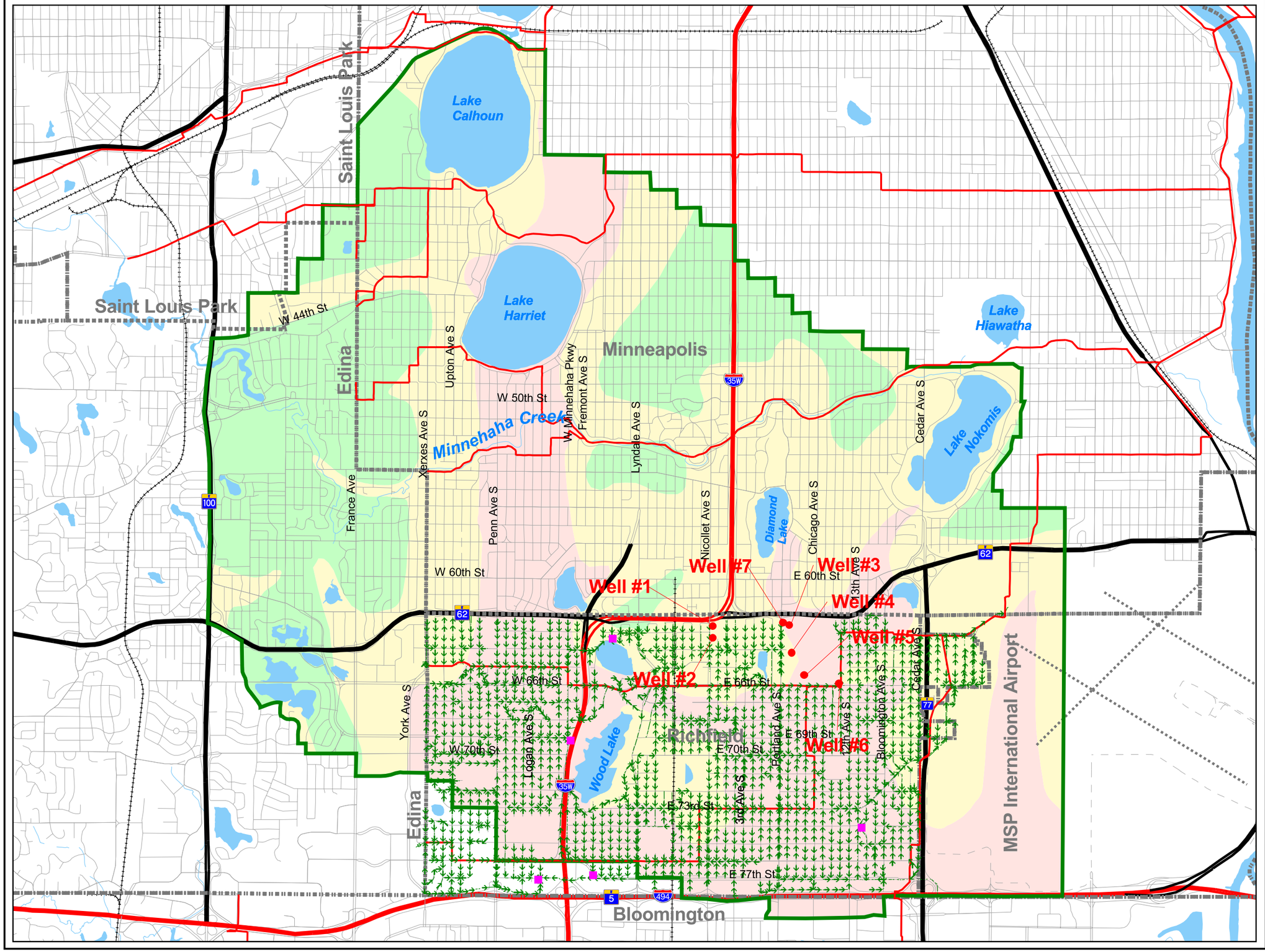
City of Richfield

Sanitary Sewer

Wellhead Protection Plan

Figure 7



- Richfield Well
- Richfield DWSMA
- Richfield lift station
- Interceptors
- Richfield san. sewer
- Flow direction

Vulnerability

- High
- Moderate
- Low

- Lake / Pond
- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

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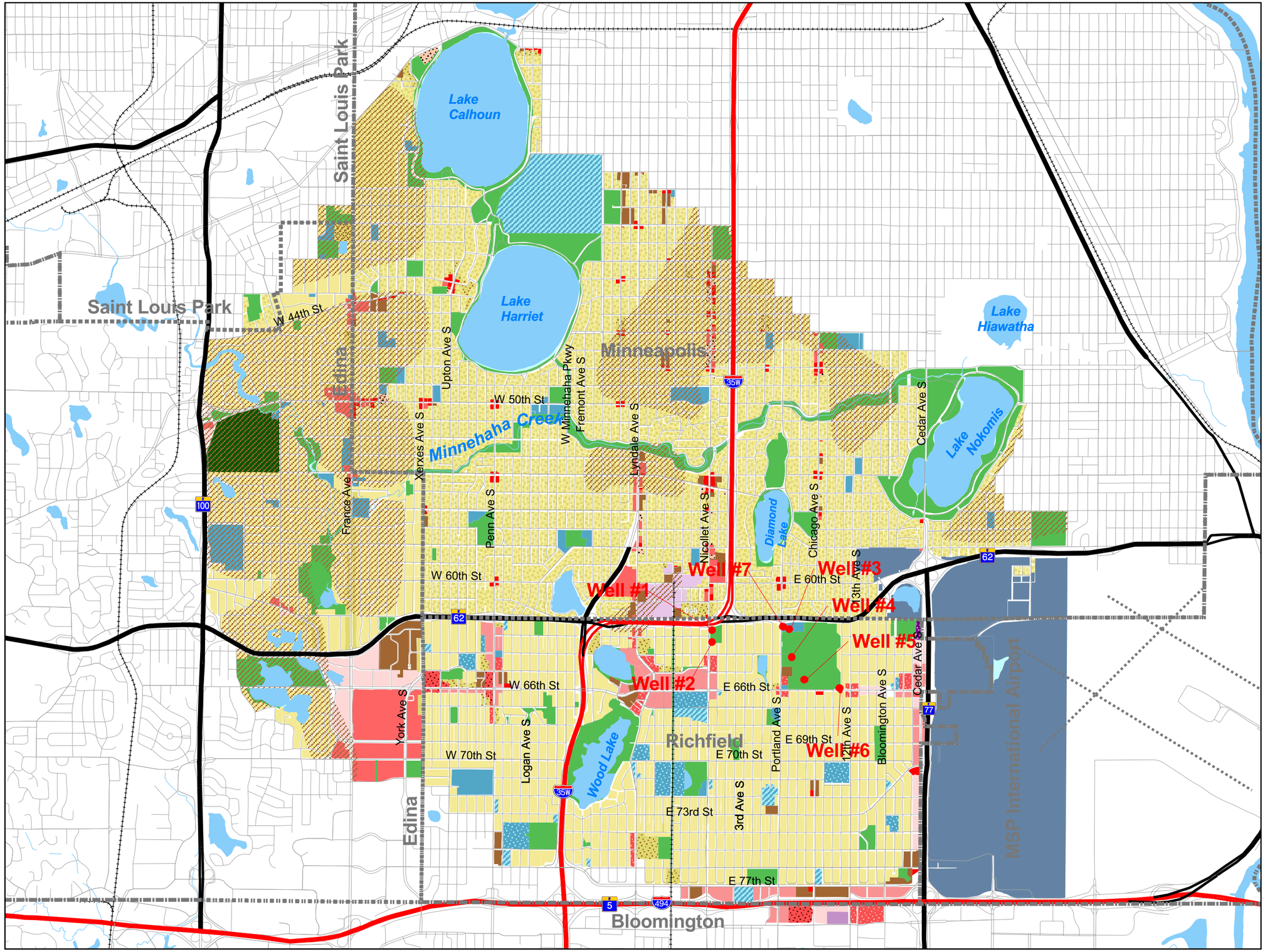
City of Richfield

PLANNED LAND USE (2020)

Wellhead Protection Plan

Figure 8



- Richfield Well
- Single Family, Detached
- Single Family, Detached & Attached
- Single Family, Attached
- Single & Multi-Family Residential
- Multi-Family Residential
- Commercial, Retail
- Neighborhood Commercial
- Community Commercial
- Regional Commercial
- Office
- Industrial, Undifferentiated
- Light Industrial
- Utility
- Mixed Use - Residential & Other
- Multiple Use - Commercial & Other
- Institutional, Undifferentiated
- Education
- Religious
- Airport
- Community Park & Recreation
- Golf Course
- Vehicular Right-of-Way
- Vacant
- Low Vulnerability
- Lake / Pond
- Municipal Boundary
- Street/ Road
- Railroad
- Runway
- Stream

* Land use data from Metropolitan Council

N W E S

Feet

3500 0 3500

CITY OF RICHFIELD

Bonestroo

May 2007

k:\673\67306114\cad\avproj\richfield_whp2.apr

TABLES

Table 1. City of Richfield Community Supply Wells

Well Name	Unique No.	Aquifer	Casing Depth (ft)	Date Completed	Vulnerability Status
1	206353	Jordan	343	6/27/1961	Vulnerable
2	206354	Jordan	345	9/7/1961	Vulnerable
3	206361	Prairie du Chien-Jordan	226	1962	Vulnerable
4	206276	Prairie du Chien-Jordan	193	9/30/1962	Vulnerable
5	206280	Prairie du Chien-Jordan	226	3/1/1963	Vulnerable
6	206279	Prairie du Chien-Jordan	225	1962	Vulnerable
7	133362	Ironton-Galesville - Eau Claire - Mt Simon	631	6/28/1977	Not Vulnerable

Table 2. Precipitation at MSP WSFO Station (215435)

	2001	2002	2003	2004	2005	Avg.
Jan	1.21	0.46	0.22	0.23	1.21	0.67
Feb	1.33	0.41	0.54	1.09	0.96	0.87
Mar	1.09	1.38	1.44	2.11	1.37	1.48
Apr	7.00	3.15	2.40	2.06	2.30	3.38
May	4.53	2.83	6.14	6.39	2.78	4.53
Jun	6.35	8.30	4.66	3.06	4.24	5.32
Jul	2.12	5.19	2.05	3.36	2.94	3.13
Aug	2.31	8.30	1.12	1.19	5.22	3.63
Sept	3.50	3.77	2.20	4.21	4.44	3.62
Oct	1.28	4.18	0.62	2.32	5.45	2.77
Nov	2.77	0.09	0.71	0.93	1.53	1.21
Dec	0.74	0.22	0.62	0.44	0.97	0.60
Total	34.23	38.28	22.72	27.39	33.41	31.21

Table 3. Metropolitan Council population forecasts.

	1990	2000	2010	2020
Richfield	35,710	34,310	37,700	41,300
Edina	46,070	47,425	49,000	50,000
Minneapolis	368,383	382,747	402,000	423,000

APPENDIX A

CONSUMER CONFIDENCE REPORT AND WATER QUALITY DATA

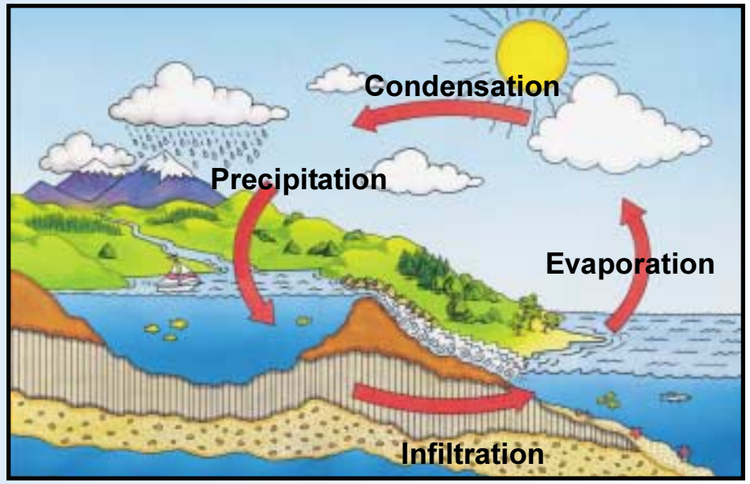
Treatment Plant Upgrades

The City of Richfield is embarking on a water treatment plant upgrade project. The project includes the following elements:

The City has recently completed the process of rebuilding all the filters in the Water Treatment Plant. This process included the replacement of the underdrain system, the filter media and the troughs. It also included the replacement of the filter controls to allow for automation of the filtering process.

- The replacement of the Lime Sludge Presses and structural modifications to the existing Lime Sludge Press building.
- The installation of Backwash Reclaim Tanks.
- The expansion of the Recarbonation Basin.
- Lime feed and delivery modifications.

Why is the Fire Hydrant open and wasting water? A Fire Hydrant's purpose is not only to fight fires, it is a main instrument for the Water Dept. to be able to purge air out of a water main. Also an important purpose of a Fire Hydrant is to maintain the highest quality of water available on lines that have lower circulation.



Stormwater Information

Storm water Education has reached a new height in Richfield. With funding from a Children's Technology grant from the Best Buy Foundation, Wood Lake Nature Center has had a brand new storm water education exhibit installed. The staff of Wood Lake, teamed up with the staff of Kidzibits Inc. and the result has been an interactive three dimensional exhibit with some very important messages about how important it is to know and protect your watershed. The finishing touches are just being made, but those who view the exhibit will come away knowing more about how big Wood Lake's watershed is and how everything from the quality of water to the flooding of the trails are affected by what is being done by residents and businesses in the area. To view this exhibit, just go to Wood Lake's museum room during its hours: Monday through Saturday from 8:30-5:00 and Noon to 5:00 on Sunday. Wood Lake is located at 6710 Lake Shore Drive in Richfield. For more information please call 612-861-9365.

Stormwater Protection

When we have pollution on the street, in our yards, or thrown from our cars, - just like water - it will move. Pollutants will eventually end up in the river or in our stormwater ponds. These actions pollute our neighborhoods, contaminate our rivers and area waterways and kill aquatic life.

You can help protect your watershed and provide clean runoff back to the river, and it's easy. You will also keep maintenance costs for cleaning these systems down.

What can you do to prevent storm water pollution?

*Mulch your lawn leaves and grass clippings instead of raking them into the street.

*Put your garbage in the garbage can, not the storm drain. Do not dump these wastes into the storm drain.

*Dispose of any oil, paint or other hazardous materials at an appropriate facility.

*Wash your car on the lawn or at a carwash, instead of on the street. Soap going into the storm drain will hurt aquatic life.

Remember, storm drains may lead straight to the water bodies without treatment. Do your part to keep our waterways clean.

Water Conservation

Your help in the efficient use of water will reduce the need for implementing water restrictions. Check for leaks in your home and at outside fixtures. Leaks will needlessly cause your water bill to increase.

You can have a green lawn and save water by following these tips:

-If your grass springs back when you step on it, it doesn't need watering.

-If it rains an inch or more, wait at least five days to water again.

-Use a sprinkler that delivers large drops, rather than a fine mist.

-Mow your grass to a length of 2" to 3", and let the clippings lie on the ground. This shades the soil to prevent evaporation.

-Let your lawn go dormant during the hot summer months. This saves money and time spent mowing.

-Spread mulch around flowerbeds, shrubs and trees this will reduce the water requirements for your landscape.

For free mulch call Randy Hughes at 612-861-9175.

The City of Richfield is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2005. The purpose of this report is to advance consumers' understanding of drinking water and to heighten awareness of the need to protect precious water resources.

Spanish: Informacion importante. Si no la entiende, haga que alguien se la traduzca ahora.

Hmong: Daim ntawv no tseem ceeb heev. Yog koj tsis to taub, nrhiav tus neeg pab txhais rau koj sai.

2005 Richfield Water Quality Report

PRESORT STD
US POSTAGE
PAID
PERMIT NO. 2256
MPLS, MN

*****ECRWSS*****
Residential Customer Local

Richfield's Water Source

The City of Richfield provides drinking water to its residents from a groundwater source: Seven wells ranging from 405 to 1066 feet deep, which draw water from the Jordan, Prairie Du Chien-Jordan and Ironton-Mt. Simon aquifers.

The water provided to customers may meet drinking standards but the Minnesota Department of Health has determined that one or more of the sources of water is potentially susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4670 or 1-800-818-9318 (press 5) during normal business hours. Also, you can view it online at: www.health.state.mn.us/divs/eh/water/swp/swa

Call Brian - Utilities Superintendent at 612-861-9168 or Judy - Water Production Supervisor at 612-861-9166 if you have questions about the City of Richfield's drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2005. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Radon- Radon is a radioactive gas which is naturally-occurring in some groundwater. It poses a lung cancer risk when gas is released from water into the air (as occurs during showering, bathing, or washing dishes or clothes) and a stomach cancer risk when it is ingested. Because radon in indoor air poses a much greater health risk than radon in drinking water, an Alternative Maximum Contaminant Level (AMCL) of 4,000 picoCuries per liter may apply in states that have adopted an Indoor Air Program, which compels citizens, homeowners, schools, and communities to reduce the radon threat from indoor air. For states without such a program, the Maximum Contaminant Level (MCL) of 300 pCi/l may apply Minnesota plans to adopt an Indoor Air Program once the Radon Rule is finalized.

How to Read the Water Quality Table

Some contaminants do not have Maximum Contaminant Levels established for them. These "unregulated contaminants" are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions.

MCLG- Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL- Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MRDL- Maximum Residual Disinfectant Level.

MRDLG- Maximum Residual Disinfectant Level Goal.

AL- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

90th Percentile Level: This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. (For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples.) Note, in situations where only 5 samples are taken, the average of the 2 highest samples is taken to determine the 90th percentile level.

pCi/l- PicoCuries per liter (a measure of radioactivity).

ppb- Parts per billion, which can also be represented as micrograms per liter (ug/l).

ppm- Parts per million, which can also be expressed as milligrams per liter (mg/l).

nd- No detection.

N/A- Not applicable (does not apply).

Detected Substance(units) MCL (highest level allowed in water by EPA) MCLG (level where there is no known health risk)	Results for Richfield's Tap Water Level Found	 Range of Detections	Typical Source of Substance in Drinking Water
Fluoride (ppm) *MCL: 4.0 MCLG: 4.0*	1.1	1.0-1.1	Additive for strong teeth; erosion of natural deposits; fertilizer and aluminum factory discharge.
Lead (ppb) 7/15/04 *AL: 15 (90% of samples tested must be <15 ppb)*	90% of samples <4	1 out of 30 samples tested > 15 ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm) 7/15/04 *AL: 1.3 (90% of samples tested must be <1.3 ppm)*	90% of samples < 0.05	0 out of 30 samples tested > 1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits.
Sodium (ppm) 8/01/03 *No established EPA limits*	38	—	Erosion of natural deposits.
Sulfate (ppm) 8/01/03 *No established EPA limits*	28	—	Erosion of natural deposits.
Chlorine (ppm) *MRDL: 4 MRDLG: 4*	1.3 Highest Quarterly Avg.	1.0-1.2 Highest Monthly Avg.	Water additive used to control microbes.
Radon (pCi/L) 11/14/01 *Limit not yet established*	28	N/A	Erosion of natural deposits.
Total Trihalomethanes (TTHM's) (ppb) *MCL: 80 MCLG: 0*	2.5	N/A	By-product of drinking water disinfection.

APPENDIX B

CITY OF RICHFIELD WATER EMERGENCY AND CONSERVATION PLAN APPROVAL NOTICE

Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-40__

March 31, 1997

John Thom
City of Richfield
6700 Portland Ave. So.
Richfield, MN 55423

Dear Mr. Thom:

WATER EMERGENCY AND CONSERVATION PLAN APPROVAL

The Department of Natural Resources (DNR) received the Richfield Water Contingency and Conservation Plan that was prepared in compliance with Minnesota Statutes 103G.291. This plan is one of 317 water emergency and conservation plans that must be reviewed and approved by DNR. Due to the limited number of DNR staff available to complete this enormous task, the DNR is pursuing several alternatives to improve response time for review and approval of plans.

In the Twin Cities Metropolitan Area (TCMA) there are 109 plans that are being reviewed by both DNR and the Metropolitan Council. To reduce duplication of effort, the DNR and Metropolitan Council have agreed to use the Metropolitan Council's comments as the technical input for plan approvals in the TCMA. This will allow DNR to devote more time on plans for communities in greater Minnesota and hopefully lead to better regional coordination of water emergency procedures and conservation practices in the TCMA.

The Metropolitan Council has completed its review of the Richfield Water Contingency and Conservation Plan therefore, the plan is hereby approved by the DNR. Water emergency and conservation plans are required to be updated every ten years, but should be reviewed each year to address items included in the implementation schedule and to assess the effectiveness of conservation efforts.

Improving water use efficiencies may be a lower cost alternative compared to constructing new wells or additions to water and wastewater treatment facilities. Please be aware that demand reduction measures must be implemented (M.S.103G.291) before requesting approvals for new wells or increases in authorized water volumes. Approval of your water emergency and conservation plan will not satisfy this requirement unless demand reduction measures are actually being implemented. Demand reduction measures must include a public education program, an evaluation of your rate structure and its impact on conservation, and may include retrofitting or other programs. If you are planning to construct a new well, please contact the DNR for approval of demand reduction measures.

Thank you for your cooperation and water supply planning efforts to promote the wise use of water. Please contact Travis Germundson at 296-0512 or Jim Japs at 297-2835 if you have questions about your plan or conservation programs.

Sincerely,
DIVISION OF WATERS

John Linc Stine, Administrator
Permits and Land Use Section

cc: Area Hydrologist Metropolitan Council permit file #62-0691

APPENDIX C

CORRESPONDENCE

April 27, 2006

Mr. Brian Young, Utility Superintendent
City of Richfield
6700 Portland Avenue
Richfield, Minnesota 55423-2599

Dear Mr. Young:

Subject: Second Scoping Decision Notice

This letter provides notice of the results of a scoping meeting held with you on April 17, 2006, at the Richfield water treatment plant regarding wellhead protection planning. During the meeting we discussed the data elements that must be included and used to prepare the part of the wellhead protection plan related to the management of potential contaminants in the approved drinking water supply management area. The enclosed Scoping Decision Notice No. 2 lists the data elements that were discussed at the meeting. Because the drinking water supply management area has been determined to have multiple vulnerability rankings for your wells, your focus will include an inventory of a variety of potential contaminant sources within the drinking water supply management area.

Because the delineation of the wellhead protection area includes portions outside Richfield city boundaries, the city will receive an additional six months for the completion of the plan. The new plan completion date is December 12, 2006. It is my understanding that Mr. Mark Janovec, of Bonestroo Rosene Anderlik and Associates, will be working with the City of Richfield in the development of Part 2 of your wellhead protection plan. Further, we discussed the formation of a wellhead protection team that could include additional city staff. If you have any questions regarding the enclosed notice, contact me by email at terry.bovee@health.state.mn.us or by phone at 507/389-6597.

Sincerely,

Terry L. Bovee, Planner
Environmental Health Division
410 Jackson Street - Suite 500
Mankato, Minnesota 56001

TLB:kmc
Enclosure
cc: Judy Disrud, Richfield Public Works
Isaac Bradlich Minnesota Department of Health
Chuck Regan, Minnesota Pollution Control Agency
Brian Williams, Minnesota Department of Agriculture
Brian Rongitsch, Minnesota Department of Natural Resources
Eric Mohring, Board of Water and Soil Resources

SCOPING DECISION NOTICE NO. 2

э **Remainder of the Wellhead Protection Plan**

Name of Public Water Supply:		**Date:**
City of Richfield	PWSID 1270045	April 27, 2006
Name of the Wellhead Protection Manager:		
Mr. Brian Young, Utility Superintendent		
Address:	**City:**	**Zip:**
6700 Portland Avenue	Richfield	55423
Unique Well Numbers:		**Phone:**
206353 (Well 1) 206354 (Well 2) 206361 (Well 3)	206276 (Well 4) 206280 (Well 5) 206279 (Well 6) 133362 (Well 7)	612-861-9700

Instructions for Completing the Scoping No. 2 Form

N	R	S	
X			**N = Not required.** If this box is checked, this data element is **NOT** necessary for your wellhead protection plan because it is not needed or it has been included in the first scoping decision notice. **Please go to the next data element**.

N	R	S	
	X		**R = Required for the remainder of the plan.** If this box is checked, this data **MUST** be used for the "**remainder of the plan**."

N	R	S	
		X	**S = Submit to MDH.** If this box is checked, this data element **MUST** be included in your **wellhead protection plan and submitted to MDH**. If there is **NO** check mark in the **"S"** box but there is an Ax@ in the A**R**@ box, this data element **MUST** be included in your plan, but should **NOT be submitted to MDH**. This box will only be checked if MDH does not have access to this data element. This will help to reduce the cost by reducing the amount of paper and time to reproduce the data element.

Note: Any data elements required in the first scoping decision notice must also be used to complete the remainder of the wellhead protection plan.

DATA ELEMENTS ABOUT THE PHYSICAL ENVIRONMENT

PRECIPITATION

N	R	S	
	X	X	An existing map or list of local precipitation gauging stations.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X	X	An existing table showing the average monthly and annual precipitation in inches for the preceding five years.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

GEOLOGY

N	R	S	
	X		An existing geologic map and a description of the geology, including aquifers, confining layers, recharge areas, discharge areas, sensitive areas as defined in Minnesota Statutes, section 103H.005, subdivision 13, and groundwater flow characteristics.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about these data elements.

N	R	S	
	X		Existing records of the geologic materials penetrated by wells, borings, exploration test holes, or excavations, including those submitted to the department.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about these data elements.

N	R	S	
	X		Existing borehole geophysical records from wells, borings, and exploration test holes.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect the geology of the areas.

N	R	S	
	X		Existing surface geophysical studies.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect the geology of the areas.

SOILS

N	R	S	
	X	X	Existing maps of the soils and a description of soil infiltration characteristics.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X	X	A description or an existing map of known eroding lands that are causing sedimentation problems.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

WATER RESOURCES			
N	**R**	**S**	An existing map of the boundaries and flow directions of major watershed units and minor watershed units.
	X		
Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	An existing map and a list of public waters as defined in Minnesota Statutes, section 103G.005, subdivision 15, and public drainage ditches.
	X		
Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	The shoreland classifications of the public waters listed under subitem (2), pursuant to part 6120.3000 and Minnesota Statutes, sections 103F.201 to 103F.221.
	X		
Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	An existing map of wetlands regulated under Chapter 8420 and Minnesota Statutes, section 103G.221 to 103G.2373**.**
	X		
Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	An existing map showing those areas delineated as floodplain by existing local ordinances.
	X		
Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.			

DATA ELEMENTS ABOUT THE LAND USE

LAND USE			
N	**R**	**S**	An existing map of parcel boundaries.
	X	X	
Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	An existing map of political boundaries.
	X		
Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.			
N	**R**	**S**	An existing map of public land surveys including township, range, and section.
	X		
Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.			

N	R	S	
	X	X	A map and an inventory of the current and historical agricultural, residential, commercial, industrial, recreational, and institutional land uses and potential contaminant sources.

Technical Assistance Comments: The inventory, mapping, and management of land uses and potential sources of contamination for all the Drinking Water Supply Management Areas must reflect what is known about this data element as follows:

Low Vulnerability - Wells, automotive disposal systems, large sewer systems serving more than 20 people, and cesspools.

Moderate Vulnerability - Wells, automotive disposal systems, large sewer systems serving more than 20 people, cesspools, and tanks.

High Vulnerability - All of the above, all land uses that may be potential sources of contamination, including stormwater management.

As a starting point, MDH will provide a list of specific potential sources of contamination from State data bases and a list of categories of potential sources of contamination that helps identify what is meant by "all potential sources of contamination." For each category identified as a potential contaminant source, a minimum of 25 individual sites must have locations and status verified prior to submitting a draft Part 2 of the WHP plan to MDH.

N	R	S	
	X	X	An existing comprehensive land-use map.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X	X	Existing zoning map.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

PUBLIC UTILITY SERVICES

N	R	S	
	X		An existing map of transportation routes or corridors.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing map of storm sewers, sanitary sewers, and public water supply systems.

Technical Assistance Comments: It is not necessary to include a map of your public water supply system in your plan if you feel it would pose a threat to the security of your system. An existing map of the storm sewers and sanitary sewers in the Drinking Water Supply Management Areas must be included in the wellhead protection plan and must also be submitted to the MDH as part of the approval.

N	R	S	
	X	X	An existing map of the gas and oil pipelines used by gas and oil suppliers.

Technical Assistance Comments: The management of the moderately and highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X	X	An existing map or list of public drainage systems.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing record of construction, maintenance, and use of the public water supply well and other wells within the drinking water supply management area.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about these data elements.

DATA ELEMENTS ABOUT WATER QUANTITY

SURFACE WATER QUANTITY

N	R	S	
	X		An existing description of high, mean, and low flows on streams.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing list of lakes where the state has established ordinary high water marks.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing list of permitted withdrawals from lakes and streams, including source, use, and amounts withdrawn.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing list of lakes and streams for which state protected levels or flows have been established.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X	X	An existing description of known water-use conflicts, including those caused by groundwater pumping.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

GROUNDWATER QUANTITY

N	R	S	
	X		An existing list of wells covered by state appropriation permits, including amounts of water appropriated, type of use, and aquifer source.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing description of known well interference problems and water use conflicts.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing list of state environmental bore holes, including unique well number, aquifer measured, years of record, and average monthly levels.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

DATA ELEMENTS ABOUT WATER QUALITY

SURFACE WATER QUALITY

N	R	S	
	X		An existing map or list of the state water quality management classification for each stream and lake.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing summary of lake and stream water quality monitoring data, including: 1. bacteriological contamination indicators; 2. inorganic chemicals; 3. organic chemicals; 4. sedimentation; 5. dissolved oxygen; and 6. excessive growth or deficiency of aquatic plants.

Technical Assistance Comments: The management of the highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

GROUNDWATER QUALITY

N	R	S	
	X		An existing summary of water quality data, including: 1. bacteriological contamination indicators; 2. inorganic chemicals; and 3. organic chemicals.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing list of water chemistry and isotopic data from wells, springs, or other groundwater sampling points.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing report of groundwater tracer studies.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing site study and well water analysis of known areas of groundwater contamination.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing property audit identifying contamination.

Technical Assistance Comments: The management of all the Drinking Water Supply Management Areas must reflect what is known about this data element.

N	R	S	
	X		An existing report to the Minnesota Department of Agriculture and the Minnesota Pollution Control Agency of contaminant spills and releases.

Technical Assistance Comments: The management of the moderately and highly vulnerable parts of the Drinking Water Supply Management Areas must reflect what is known about this data element.

METROPOLITAN AIRPORTS COMMISSION

Minneapolis-Saint Paul International Airport
6040 - 28th Avenue South • Minneapolis, MN 55450-2799
Phone (612) 726-8100

April 20, 2007

Brian Young, Utility Supervisor
City of Richfield
6700 Portland Avenue
Richfield, MN 55423-2599

RE: City of Richfield – draft Wellhead Protection Plan Part II

Dear Mr. Young:

Thank you for the opportunity to comment on the City's draft Wellhead Protection Plan, Part II.

The delineated Wellhead Protection Area (WHP) encompasses a portion of the MSP International Airport property including areas of both High and Moderate vulnerability. The potential contaminant source inventory conducted for the WHP area, referenced as Figure 6, illustrates a variety of sites including wells, LUST sites, storage tanks and a hotel located on airport property. While these sites are not labeled or discussed individually, it should be noted that the Metropolitan Airports Commission (MAC) Environment Department believes that most of the sites no longer exist. They have either been closed by sealing the wells, removing the tanks and/or closing the LUST sites. In addition, the MAC is unaware of the existence of a hotel/motel at the location indicated on Figure 6.

The MAC supports your efforts to safeguard the City's water supply and, should it be needed, would be able to provide information available to us to allow you to more accurately depict the potential contaminant sources located on airport property.

Sincerely,

Toni J. Howell

Toni J. Howell
Manager, Environmental Affairs

April 20, 2007

Mr. Brian Young
Utility Superintendent
City of Richfield
6700 Portland Avenue
Richfield, Minnesota 55423-2599

RE: City of Richfield Wellhead Protection Plan
Metropolitan Council District 5
Referral File No. 19975-1

Dear Mr. Young:

The Metropolitan Council (Council) received the City of Richfield Part II Wellhead Protection (WHP) Plan on February 26, 2007. Council staff reviewed this plan, along with Part I of the plan, as an amendment to the public facilities section of the local comprehensive plan, under the provisions of Minnesota Statute §473.859, Subd. 3 (4) (vii). The WHP Plan provides a very good overview of the water supply source and measures to protect it. The following are some brief comments on Part 2.

Chapter 4.7 (Groundwater Quantity), page 11, states that no new wells will be required to supply the projected increase in demand, because conservation measures are in place. In 2003, the city was pumping 98% of the Council-projected 2010 annual water need for Richfield. A more thorough analysis of future water supply needs seems warranted, particularly as Richfield's population is expected to increase by 20% from 2000 to 2020.

From the existing discussion in Chapter 6.2 (Changes to Surface and Groundwater), it is unclear if any changes to surface and groundwater are expected. This chapter should include the city's assumptions regarding future surface and groundwater conditions considering, for example, expected changes in management strategies, land use or climate. Is runoff expected to increase or decrease? Is groundwater recharge expected to increase or decrease? Will water quality be degraded or improve?

Council staff commend the city for the comprehensive and well-organized presentation of Chapter 7 (Problems and Opportunities). Details regarding existing governmental controls are particularly valuable, but could be expanded to address the effectiveness of each control regarding groundwater protection. An analysis of local controls may be a good action item to include in Chapter 8.

Chapter 8 puts forth several good objectives and strategies. Specific information about which city staff will be responsible for the various action items would further strengthen the management strategies. It is unclear, for example, who will be responsible for monitoring setbacks for all new potential sources of contamination within the Inner Wellhead Management Zone (Action C1). Also, consider adding success criteria to each action item to help evaluate the program. For example, consider setting a goal to publish four newsletter articles annually (Action A1).

Objective B3 (Educate the Public about Well Management), page 26, has only one action item. Consider providing educational materials to well owners in addition to linking the city's web pages to those of the MN Department of Health.

Objective J (Identify Impacts on WHPA of New High Capacity Wells), page 30, should include a strategy for assessing impacts to the wellhead protection area from new wells. The single action item presented here only sets forth the plan to identify new wells.

Chapter 9 (Guidance for Use by City of Richfield Staff Wellhead Protection Planning), page 33, is well presented and could be improved with the inclusion of additional detail for a number of items. One example is found on page 33. The Community Development and Planning Commission are asked to report any unusual infiltration or stormwater issues to the wellhead protection manager, but the definition of "unusual" infiltration of storm-water issues is not specified.

This letter completes the Council's review process. On behalf of the Council, I thank you for your effort in preparing this plan. Please send us a copy of the finalized WHP Plan, if any revisions are made. Should any questions arise on the Council's review comments or on the process it followed, please feel free to contact Lanya Ross of the Council's Environmental Services Division at (651) 602-1803 or lanya.ross@metc.state.mn.us.

Sincerely,

for Keith Buttleman
Assistant General Manager, Environmental Quality Assurance

Cc: Russ Susag, Metropolitan Council Member, District 5
Steve Robertson, Minnesota Department of Health
Denise Engen, Metropolitan Council Sector Representative

MINNESOTA MDH DEPARTMENT OF HEALTH

Protecting, maintaining and improving the health of all Minnesotans

September 17, 2007

Mr. Brian Young
Utility Superintendent
City of Richfield
6700 Portland Avenue
Richfield, Minnesota 55423

Dear Mr. Young:

Subject: City of Richfield, Wellhead Protection Plan, Part 2

I have reviewed the remaining part of the wellhead protection plan (Part 2) for the city of Richfield, received June 8, 2007, according to the requirements of Minnesota Rules, part 4720.5555, subparts 1 and 2. The following principles were used as a basis for review:

- **Compliance with the rule -** the wellhead protection plan must be in compliance with parts 4720.5100 to 4720.5590.

- **Sound management of water resources** - includes evaluations concerning whether significant up- or down-gradient effects on groundwater may result from management controls specified in the plan. Source management options should be based on sound data and technical analysis, and the interactions between surface water and groundwater are considered. Also, the effects of short- and long-term variations in precipitation must be evaluated for their impacts on source management.

- **Effective health and environmental protection** - includes preventing potential water and related land resource problems which may impact the public wells, identifying anticipated and appropriate improvements in the quality of the environment within the drinking water supply management area, and promoting public health and safety.

- **Efficient management of potential contaminant sources** - includes estimating the cost of implementing the wellhead protection plan. Also, the management approach must identify 1) mechanisms for funding plan implementation, 2) how coordination will be achieved with participating state and local agencies, 3) approaches that were used to identify source management problems and opportunities to correct them, and 4) how water conservation practices will be used to support wellhead protection goals.

The plan provides an adequate assessment of the city's source waters and contains goals, objectives, and action strategies for the potential sources covered by the plan. Richfield is commended for their efforts in preparing a plan to protect their drinking water supply from contamination.

The purpose of this letter is to notify you that the Minnesota Department of Health finds the plan to be consistent with Minnesota's wellhead protection rules and approves your plan for:

Well No.	Unique Well No.
1	206353
2	206354
3	206361
4	206276
5	206280
6	206279
7	133362

Upon receipt of this letter, the city of Richfield has up to 60 days to: 1) begin implementation of your wellhead protection plan (Minnesota Rules, part 4720.5560, subpart 1); and 2) notify all local units of government within the drinking water supply management area of the adoption of your plan (Minnesota Rules, part 4720.5560, subpart 2).

Should you have any questions in the future or would like assistance with the implementation of your plan, please contact me at terry.bovee@health.state.mn.us or (507) 389-6597.

Sincerely,

Terry L. Bovee, Planner
Source Water Protection Unit
Environmental Health Division
410 Jackson Street, Suite 500
Mankato, Minnesota 56001

TLB:TVW
cc: Mr. Mark Janovec, Bonestroo
Mr. Isaac Bradlich, Engineer, Community Public Water Supply Unit, Metro Office

APPENDIX D

PUBLIC HEARING DOCUMENTATION

CITY OF RICHFIELD, MINNESOTA
TUESDAY, APRIL 24, 2007

****

SPECIAL CONCURRENT RICHFIELD CITY COUNCIL
AND
RICHFIELD SCHOOL BOARD MEETING

COUNCIL CHAMBERS
6700 PORTLAND AVENUE

5:30 P.M.

AGENDA

Call to order

1. Update on City activities/initiatives

Notes: _____
_____
_____

2. Update on School District activities/initiatives

Notes: _____
_____
_____

3. Adjournment

****

REGULAR CITY COUNCIL MEETING

COUNCIL CHAMBERS
6700 PORTLAND AVENUE

7:00 P.M.

AGENDA

INTRODUCTORY PROCEEDINGS

Call to order

Roll call

Open forum (15 minutes maximum)

Each speaker is to keep their comment period to three minutes to allow sufficient time for others. Comments are to be an opportunity to address the Council on items not on the agenda. Individuals who wish to address the Council must have registered prior to the meeting.

Notes: _____
_____
_____

Pledge of Allegiance

Approval of minutes of (1) Special City Council Worksession of April 10, 2007 and (2) Regular City Council Meeting of April 10, 2007

PRESENTATIONS

1. Presentation of Richfield Restaurant Recognition Awards by Richfield Advisory Board of Health: (Council Memo No. 70)
   Full Service Restaurant
   Broadway Pizza – Winner
   Bon Apetit (Best Buy location) - Nominee
   Patrick's Bakery - Nominee
   Thompson's Fireside Pizza - Nominee
   Limited Service Food Service
   Starbucks - Winner
   Border's Cafe - Nominee
   Fast Food/Pizza Cafeteria Service
   Chipotle - Winner
   Quizno's – Nominee
   Taco Bell - Nominee

2. Presentation of proclamation designating May as Arbor Month in Richfield

COUNCIL DISCUSSION

3. Council discussion
   - Hats Off To Hometown Hits

Notes: _____
_____
_____

AGENDA APPROVAL

4. Council approval of agenda

CONSENT CALENDAR

5. **Consent Calendar contains several separate items, which are acted upon by the City Council in one motion. Once the Consent Calendar has been approved, the individual items and recommended actions have also been approved. No further Council action is necessary. However, any Council Member may request that an item be removed from the Consent Calendar and placed on the regular agenda for Council discussion and action. All items listed on the Consent Calendar are recommended for approval.**
   A. Consideration of approval of continuing public hearing and second reading to May 8, 2007 of amendment to Richfield Zoning Code Section 546 to allow variances processed

in conjunction with another planning and zoning request that requires City Council approval S.R. No. 101

B. Consideration of approval of resolution authorizing Public Safety Department to accept $1500 grant from Hennepin County for Joint Community Police Partnership program S.R. No. 102
C. Consideration of approval of resolution authorizing City to enter into three-year agreement with The Standard Insurance Company for long-term disability insurance benefits S.R. No. 103
D. Consideration of approval of purchase of Maenke Brothers Outdoor, Inc. services for landscape maintenance of Lyndale/Hub/Nicollet and 77th Street districts and 35W and 66th Street bridge area in amount of $39,577 S.R. No. 104
E. Consideration of approval of bid minutes/tabulation and award of contract to North Star Tree Care for 2007 diseased tree removal on private property in amount of $106,980 S.R. No. 105

Notes: _____
_____
_____

6. Consideration of items, if any, removed from Consent Calendar

Notes: _____
_____
_____

PUBLIC HEARINGS

7. Public hearing regarding issuance of new 2007 on-sale wine liquor and 3.2 percent malt liquor licenses for Naviya's Thai Restaurant, 6345 Penn Avenue

Staff Report No. 106

Notes: _____
_____
_____

8. Public hearing regarding acceptance of Richfield's Wellhead Protection Plan Part 2

Staff Report No. 107

Notes: _____
_____
_____

9. Public hearing regarding preliminary resolution approving financing of multi-family housing development project undertaken by @ Home Apartments dba as Lynwood Partners, L.L.C.; 7437 Lyndale Avenue

Staff Report No. 108

Notes: _____
_____
_____

RESOLUTIONS

10. Consideration of resolution committing that City will not sell or encumber through easement or license or otherwise, any land that it owns within the area covered in preliminary agreement between Richfield HRA and United Bankers' Bank

Staff Report No. 109

Notes: _____
_____
_____

11. Consideration of resolution committing that City will not sell or encumber through easement or license or otherwise, any land that it owns within the area covered in preliminary agreement between Richfield HRA and TOLD Development Company

Staff Report No. 110

Notes: _____
_____
_____

OTHER BUSINESS

12. Consideration-of-right of entry agreement for use of portions of 6701-18th Avenue; 6709-18th Avenue, 6721-18th Avenue and 6700 Cedar Avenue by United Bankers' Bank

Staff Report No. 111

Notes: _____
_____
_____

13. Consideration of right-of-entry agreement for use of portions of lots southerly of 66th Street East between 66th and 69th Streets between 17th Avenue and Trunk Highway 77 by TOLD Development Company

Staff Report No. 112

Notes: _____
_____
_____

14. Consideration purchase agreement between City and Cornerstone Advocacy Service, owner of property at 6600 Oakland Avenue, as part of 66th Street and Portland Avenue intersection project

Staff Report No. 113

Notes: _____
_____
_____

15. Consideration of bid minutes/tabulation and award of contract to Northern Water Works Supply Company for water meter replacement and installation of automated meter reading system in amount of $2,496,252.28

Staff Report No. 114

Notes: _____
_____
_____

CITY MANAGER'S REPORT

16. City Manager's report

Notes: _____
_____
_____

17. Claims and payrolls

Open forum (additional 15 minutes if more time needed after first Open Forum and by majority vote of the City Council)

Each speaker is to keep their comment period to three minutes to allow sufficient time for others. Comments are to be an opportunity to address the Council on items not on the agenda. Individuals who wish to address the Council must have registered prior to the meeting.

Notes: _____
_____
_____

18. Adjournment

Auxiliary aids for individuals with disabilities are available upon request. Requests must be made at least 96 hours in advance to the City Clerk at 612-861-9738.

CITY COUNCIL MEETING MINUTES
Richfield, Minnesota

Regular Meeting

April 24, 2007

CALL TO ORDER

The meeting was called to order by Mayor Goettel at 7:04 p.m.

ROLL CALL

Members Present: Debbie Goettel, Mayor; Sue Sandahl; Fred Wroge; Bill Kilian; and Susan Rosenberg.

Staff Present: Steve Devich, City Manager; Mike Eastling, Public Works Director; Bruce Palmborg, Community Development Director; Chris Regis, Finance Manager; Pat Smith, Community Development Manager; Betsy Osborn, Health Administrator; Brian Young, Utility Superintendent; Cheryl Krumholz, Recording Secretary; and Corrine Thomson, City Attorney.

OPEN FORUM

No one was registered to speak.

PRESENTATION OF COLORS AND PLEDGE OF ALLEGIANCE

Mayor Goettel led the audience in the Pledge of Allegiance.

APPROVAL OF MINUTES

M/Rosenberg, S/Sandahl to approve the minutes of (1) Special City Council Worksession of April 10, 2007 and (2) Regular City Council Meeting of April 10, 2007.

Motion carried 5-0.

Item #1	**PRESENTATION OF RICHFIELD RESTAURANT RECOGNITION AWARDS BY RICHFIELD ADVISORY BOARD OF HEALTH (COUNCIL MEMO NO. 70)**

Michelle Padua, Advisory Board of Health Chair, presented the restaurant recognition awards to:

Full Service Restaurant
Broadway Pizza – Winner
Bon Apetit (Best Buy location) - Nominee
Patrick's Bakery - Nominee
Thompson's Fireside Pizza - Nominee
Limited Service Food Service
Starbucks - Winner
Border's Cafe - Nominee
Fast Food/Pizza Cafeteria Service
Chipotle - Winner
Quizno's – Nominee
Taco Bell - Nominee

Health Administrator Osborn acknowledged the efforts of the interview team who are members of the Richfield/Bloomington Food Collaborative.

Item #2	**PRESENTATION OF PROCLAMATION DESIGNATING MAY AS ARBOR MONTH IN RICHFIELD**

Mayor Goettel read the proclamation designating May as Arbor Month in Richfield.

Item #3	**COUNCIL DISCUSSION** ? **HATS OFF TO HOMETOWN HITS**

Council Member Rosenberg announced the Richfield Beautiful Home & Garden Tour on June 23. She acknowledged the efforts of the co-chairs in preparing for this tour.

Council Member Kilian announced a Crosstown Reconstruction Project public informational session on April 24 from 4 to 6 p.m. at Richfield Lutheran Church, 60th Street/Nicollet Avenue.

Council Member Kilian invited former Mayor and current HRA Commissioner Marty Kirsch to discuss the Cedar Point award.

Martin Kirsch, 6725 Penn Avenue, displayed the Cedar Point Commons “2006 Best in Real Estate” award for Best Retail Development recently announced and presented by the Minneapolis-St. Paul Business Journal.

Council Member Wroge stated that at the Worksession held prior to this meeting, the Public Safety Department reported a number of arrests have been made in graffiti incidents.

Mayor Goettel reported on the recent veterans’ forum at VFW.

Item #4	COUNCIL APPROVAL OF AGENDA

M/Kilian, S/Sandahl to approve the agenda.

Motion carried 5-0.

Item #5	CONSENT CALENDAR

A. Approved continuing public hearing and second reading to May 8, 2007 of amendment to Richfield Zoning Code Section 546 to allow variances processed in conjunction with another planning and zoning request that requires City Council approval S.R. No. 101

B. Approved resolution authorizing Public Safety Department to accept $1500 grant from Hennepin County for Joint Community Police Partnership program S.R. No. 102

RESOLUTION NO. 9920

RESOLUTION AUTHORIZING RICHFIELD PUBLIC SAFETY/POLICE TO ACCEPT A GRANT IN THE AMOUNT OF $1500 FROM THE HENNEPIN COUNTY JOINT COMMUNITY POLICE PARTNERSHIP PROGRAM

This resolution appears as Resolution No. 9920.

C. Approved resolution authorizing City to enter into three-year agreement with The Standard Insurance Company for long-term disability insurance benefits S.R. No. 103

RESOLUTION NO. 9921

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH THE STANDARD INSURANCE COMPANY FOR LONG-TERM DISABILITY INSURANCE BENEFITS

This resolution appears as Resolution No. 9921.

D. Approved purchase of Maenke Brothers Outdoor, Inc. services for landscape maintenance of Lyndale/Hub/Nicollet and 77th Street districts and 35W and 66th Street bridge area in amount of $39,577 S.R. No. 104

E. Approved bid minutes/tabulation and award of contract to North Star Tree Care for 2007 diseased tree removal on private property in amount of $106,980 S.R. No. 105

M/Rosenberg, S/Kilian to approve the Consent Calendar.

Motion carried 5-0.

Mayor Goettel requested an explanation of the sealed bid process for contracts.

City Manager Devich explained the process pursuant to State Statute.

Public Works Director Eastling stated Maenke Brothers Outdoor, Inc. (Item 5D) uses 77th Street as a showpiece for other projects.

Item #6	**CONSIDERATION OF ITEMS, IF ANY, REMOVED FROM CONSENT CALENDAR**

None.

Item #7	**PUBLIC HEARING REGARDING ISSUANCE OF NEW 2007 ON-SALE WINE LIQUOR AND 3.2 PERCENT MALT LIQUOR LICENSES FOR NAVIYA'S THAI RESTAURANT, 6345 PENN AVENUE S.R. NO. 106**

Council Member Rosenberg presented Staff Report No. 106.

Kim LaBarge, Naviya's Thai Restaurant, stated his wife, Naviya, was recently named a successful woman in business by the *Sun Current*.

M/Rosenberg, S/Sandahl to close the public hearing.

Motion carried 5-0.

M/Rosenberg, S/Kilian to approve the issuance of a new 2007 on-sale wine liquor license; and a new 3.2 percent malt liquor license for Naviya's' Thai Restaurant, 6345 Penn Avenue South, Richfield.

Motion carried 5-0.

Item #8	**PUBLIC HEARING REGARDING ACCEPTANCE OF RICHFIELD'S WELLHEAD PROTECTION PLAN PART 2 S.R. NO. 107**

Mayor Goettel presented Staff Report No. 107.

Mark Janovec, Bonestroo, Rosene, Anderlik & Associates, presented a summary of the plan.

Council Member Kilian asked about potential contamination if residential wells are not capped and sealed.

Mr. Janovec said there are no concerns if the well is properly maintained.

Mayor Goettel asked about the handling of areas outside Richfield.

Mr. Janovec said there are benefits to working cooperatively with other areas. If there are problems with maintenance, either the Minnesota Department of Health or Pollution Control Agency will become involved.

Council Member Wroge asked about terrorist issues related to Richfield's aquifers.

Mr. Janovec explained the aquifer and well depths in Richfield.

Mayor Goettel asked about the number and monitoring of wells in the City.

Utility Superintendent Young stated some records are held by the City, some by the State.

M/Kilian, S/Wroge to close the public hearing.

Motion carried 5-0.

M/Goettel, S/Sandahl to accept Richfield's Wellhead Protection Plan Part 2.

Motion carried 5-0.

Item #9	**PUBLIC HEARING REGARDING PRELIMINARY RESOLUTION APPROVING FINANCING OF MULTI-FAMILY HOUSING DEVELOPMENT PROJECT UNDERTAKEN BY @ HOME APARTMENTS DBA AS LYNWOOD PARTNERS, L.L.C.; 7437 LYNDALE AVENUE S.R. NO. 108**

Council Member Sandahl presented Staff Report No. 108.

Mike Cashill, @ Home Apartments, discussed the renovation and rehabilitation plans for the Gateway Apartments. He added no one would be displaced since the work would be done as turnover occurs.

Council Member Sandahl asked about some of the one-bedroom units being made into two-three bedroom units.

Mr. Cashill said there are no plans to change the number of bedrooms in each unit.

Council Member Rosenberg asked about a screening process to avoid overcrowding in units.

Mr. Cashill said they conduct thorough criminal background checks and are active in the Minnesota Multi-Housing Association. Local and State laws regarding occupancy are followed.

Council Member Rosenberg asked about maintaining affordability.

Mr. Cashill explained that 20% of the units are occupied by people with 50% or less of the median income.

Council Member Wroge asked about the current occupancy rate.

Mr. Cashill stated it's at approximately 95% occupancy but has been as low as 85%.

Mayor Goettel said she was pleased to see improvements are coming to the apartments.

Council Member Sandahl said the need for improvements was discussed a long-time ago.

M/Wroge, S/Kilian to close the public hearing.

Motion carried 5-0.

M/Sandahl, S/Kilian that the following resolution be adopted and that it be made part of these minutes:

RESOLUTION NO. 9922

RESOLUTION RELATING TO A MULTIFAMILY HOUSING DEVELOPMENT TO BE ACQUIRED, OWNED, AND OPERATED BY LYNWOOD PARTNERS, L.L.C., A MINNESOTA LIMITED LIABILITY COMPANY, AND THE ISSUANCE OF REVENUE BONDS TO FINANCE AND REFINANCE THE COSTS THEREOF UNDER MINNESOTA STATUTES, CHAPTER 462C, AS AMENDED; GRANTING PRELIMINARY APPROVAL THERETO, ESTABLISHING COMPLIANCE WITH CERTAIN REIMBURSEMENT REGULATIONS UNDER THE INTERNAL REVENUE CODE OF 1986, AS AMENDED, AND TAKING CERTAIN OTHER ACTIONS WITH RESPECT THERETO

Motion carried 5-0. This resolution appears as Resolution No. 9922.

Item #10	**CONSIDERATION OF RESOLUTION COMMITTING THAT CITY WILL NOT SELL OR ENCUMBER THROUGH EASEMENT OR LICENSE OR OTHERWISE, ANY LAND THAT IT OWNS WITHIN THE AREA COVERED IN PRELIMINARY AGREEMENT BETWEEN RICHFIELD HRA AND UNITED BANKERS' BANK S.R. NO. 109**

Council Member Wroge presented Staff Report No. 109.

Community Development Director Palmborg discussed the site, including the parcels owned by the City.

Gene Ekness, United Bankers' Bank (UBB), stated when the opportunity of this site became available, the City of Richfield was determined to be the best location for their corporate headquarters and employees.

Mr. Ekness discussed the possible two-level, heated, underground parking. The water table is the key issue. The majority of land would be green space.

Council Member Kilian said he was pleased that UBB would seek neighborhood input. This use would be less intense and intrusive to the residents.

M/Wroge, S/Sandahl that the following resolution be adopted and that it be made part of these minutes:

RESOLUTION NO. 9923

RESOLUTION RELATING TO THE
DEVELOPMENT OF CITY-OWNED PROPERTY

Council Member Wroge asked about other organizations not being able to come forward because they're block out for nine months with this agreement.

Community Development Manager Smith said the City would work only with UBB for nine months.

Motion carried 5-0. This resolution appears as Resolution No. 9923.

Item #11	**CONSIDERATION OF RESOLUTION COMMITTING THAT CITY WILL NOT SELL OR ENCUMBER THROUGH EASEMENT OR LICENSE OR OTHERWISE, ANY LAND THAT IT OWNS WITHIN THE AREA COVERED IN PRELIMINARY AGREEMENT BETWEEN RICHFIELD HRA AND TOLD DEVELOPMENT COMPANY S.R. NO. 110**

Council Member Wroge presented Staff Report No. 110.

Community Development Director Palmborg discussed the proposed feasibility study area. If the area is determined feasible after investigative and evaluative work, TOLD could make an offer of redevelopment.

Gary Dreher, TOLD Development Company, stated there are some obstacles to overcome but they are excited for the opportunity to explore redevelopment options.

Council Member Wroge asked about mixed uses.

Mr. Dreher explained there could be many different uses depending upon the market, viability as an office corridor and economics.

Council Member Kilian stated there is a need to work with the neighborhood regarding compatible uses.

Mr. Dreher said TOLD views redevelopment as a collaborative effort, including interaction and communication.

Tom Junilla, real estate consultant for the Dental Health Care Center, 1717 East 66th Street, addressed the City Council regarding the clinic's proposal to acquire land adjacent to the clinic from the City of Richfield because the new roundabout at 17th Avenue/66th Street will significantly impact the clinics parking capacity. He said the clinic pledges collaboration with TOLD. He affirmed growth at this location with renovation of the interior and exterior of the building.

Mr. Junilla said the commitment before the City Council tonight does not apply to 1717 East 66th Street to address parking concerns raised by the owners.

Mayor Goettel said she was excited businesses want to improve.

Council Member Kilian stated this site is a gateway to the 30 acres in the proposed TOLD agreement. A single story building may not be appropriate. It is important to keep everyone in mind but not at a detriment to others.

Council Member Wroge asked about the prior obligation to exclude the clinic from the 30 acres.

City Attorney Thomson explained there were no prior contractual obligations to exclude 1717 East 66th Street prior to this resolution. Ryan has the right of first refusal. There is no time limit to provide assistance to address the clinic's parking concerns.

Council Member Wroge said the clinic needs to wait nine months.

City Attorney Thomson stated the exception in the commitment allows the City to enter an agreement to assist with parking at the clinic.

Council Member Wroge said there is still the right to sell, rent or least the land to the clinic.

City Attorney Thomson stated City staff can also discuss with TOLD the impact this clinic would have on redevelopment options.

M/Wroge, S/Sandahl that the following resolution be adopted and that it be made part of these minutes:

RESOLUTION NO. 9924

RESOLUTION RELATING TO THE
DEVELOPMENT OF CITY-OWNED PROPERTY

Council Member Sandahl stated there is a nine-month window and it's not known if anything will happen. Nothing is guaranteed, only an opportunity to explore options.

Council Member Kilian added this is also a chance to find potential problems.

Council Member Wroge advised homeowners to wait before moving forward.

Motion carried 5-0. This resolution appears as Resolution No. 9924.

Item #12	**CONSIDERATION-OF-RIGHT OF ENTRY AGREEMENT FOR USE OF PORTIONS OF 6701-18TH AVENUE; 6709-18TH AVENUE, 6721-18TH AVENUE AND 6700 CEDAR AVENUE BY UNITED BANKERS' BANK S.R. NO. 111**

Council Member Kilian presented Staff Report No. 111.

M/Kilian, S/Wroge to approve a Right-of-Entry Agreement for use of portions of 6701 18th Avenue South, 6709 18th Avenue South, 6721 18th Avenue South and 6700 Cedar Avenue South by United Bankers Bank.

Motion carried 5-0.

Item #13	**CONSIDERATION OF RIGHT-OF-ENTRY AGREEMENT FOR USE OF PORTIONS OF LOTS SOUTHERLY OF 66TH STREET EAST BETWEEN 66TH AND 69TH STREETS BETWEEN 17TH AVENUE AND TRUNK HIGHWAY 77 BY TOLD DEVELOPMENT COMPANY S.R. NO. 112**

Council Member Kilian presented Staff Report No. 112.

M/Kilian, S/Wroge to approve a Right-of-Entry Agreement for use of portions of the lots southerly of 66th Street East between 66th and 69th Streets and between 17th Avenue and Trunk Highway 77 by TOLD Development Company.

Council Member Wroge asked about the Metropolitan Airports Commission (MAC) ownership of four parcels.

Community Development Manager Smith said MAC parcels are not included but are encumbered by Ryan's right of first refusal.

Council Member Kilian stated residents in Phase II across from Super Target may wonder why development is advancing to the south.

Community Development Manager Smith explained request for proposals for Phase II were sent to 50 developers and architects with a May 10 deadline. Hopefully qualified applications will be received resulting in a preliminary development agreement before the HRA in June. No timetable is set because of the market and acquisition costs.

Motion carried 5-0.

Item #14	**CONSIDERATION PURCHASE AGREEMENT BETWEEN CITY AND CORNERSTONE ADVOCACY SERVICE, OWNER OF PROPERTY AT 6600 OAKLAND AVENUE, AS PART OF 66TH STREET AND PORTLAND AVENUE INTERSECTION PROJECT S.R. NO. 113**

Council Member Sandahl presented Staff Report No. 113.

M/Sandahl, S/Rosenberg to authorize the Mayor and City Manager to execute the proposed Purchase Agreement between the City of Richfield and Cornerstone Advocacy Service, a Minnesota nonprofit corporation, for the acquisition of the property located at 6600 Oakland Avenue.

Council Member Wroge questioned why the appraised value of $235,000 was not offered.

City Attorney Thomson stated she could not speak to specifics because she was not involved in the negotiations. When the appraised value was offered, the property owner rejected it as not being adequate in their opinion. If an agreement cannot be reached, the property goes to the condemnation process. This property was in condemnation for a partial taking but the project design changed. To amend the condemnation, costs would be incurred and there is a risk to be considered. The acquisition consultant considered all these factors to reach an agreement.

Council Member Wroge said he has a problem with the purchase price because the property is unusable and now it's being bought out.

City Manager Devich stated the $235,000 appraisal was used at the beginning as a partial take. Another appraisal could have increased the value. The 10% variance is common and acceptable. If there was a disagreement, costs incurred would be more than 10%.

Council Member Wroge said another appraisal could also have been less.

Council Member Rosenberg stated it has been the City's practice to work with the property owner and be honorable in all negotiations. Just because the owner is a non-profit does not mean they do not accept the best price.

Council Member Wroge clarified that he meant the property could not have been sold to a family and it would be hard to sell it to another non-profit.

Public Works Director Eastling stated the advisor, Ken Helvey, laid out the options and recommended acceptance.

Council Member Sandahl said she supported the purchase agreement as a meeting of the minds on fair market value.

Council Member Kilian said he supported the purchase agreement because the site is zoned commercial so it could be something different and 10% over the initial offer is acceptable.

Public Works Director Eastling clarified the resolution with the Staff Report stating $235,000 was provided for reference to set just compensation to document previous City Council action.

Mayor Goettel stated more could be spent in attorney fees than the 10% if an agreement was not reached. She said she would be concerned if it was more than 10% but it may be time to cut the losses to move forward and keep the project on track.

Motion carried 5-0.

Item #15	**CONSIDERATION OF BID MINUTES/TABULATION AND AWARD OF CONTRACT TO NORTHERN WATER WORKS SUPPLY COMPANY FOR WATER METER REPLACEMENT AND INSTALLATION OF AUTOMATED METER READING SYSTEM IN AMOUNT OF $2,496,252.28 S.R. NO. 114**

Council Member Rosenberg presented Staff Report No. 114.

M/Rosenberg, S/Sandahl to approve the bid minutes and tabulation and award of contract to Northern Water Works Supply Company in the amount of $2,496,252.28.

Motion carried 5-0.

Item #16	**CITY MANAGER'S REPORT**

City Manager Devich reported on the following:

- City of Richfield received the Minnesota Chapter, 2007 Women in Transportation Study Employer of the Year award.
- Audio upgrades in the Council Chambers.

Item #17	**CLAIMS AND PAYROLL**

M/Rosenberg, S/Kilian that the following claims and payrolls be approved:

U. S. BANK

A/P Checks:	158438 - 158754	$ 1,062,096.67
PAYROLL	38971 - 39295; 41250	$ 457,549.57
TOTAL		$ 1,519,646.24

Motion carried 5-0.

ADJOURNMENT

The City Council meeting was adjourned by unanimous consent at 8:52 p.m.

Date Approved:_____

Debbie Goettel
Mayor

Cheryl Krumholz
Recording Secretary

Steven L. Devich
City Manager